

TOSHIBA

FILE NO. 130-9803

SERVICE MANUAL

VIDEO CASSETTE RECORDER

V-208EG, V-408EG
V-208F, V-408F
V-208CZR

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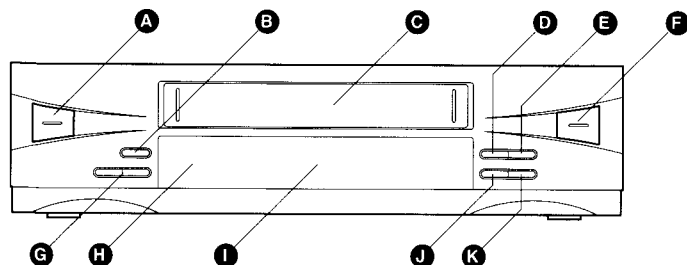
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INTRODUCTION

IDENTIFICATION OF CONTROLS

Front Panel

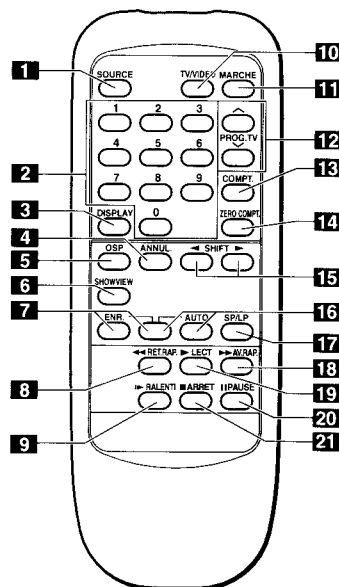
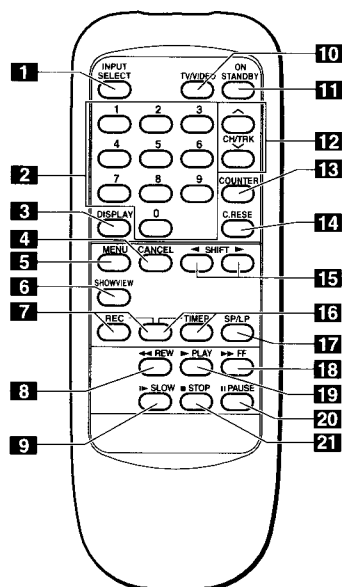


- A** ON/STANDBY button
- B** REC (Record) button
- C** Cassette compartment
- D** PLAY button
- E** STOP button
- F** EJECT button
- G** CHANNEL buttons
- H** Remote sensor
- I** VTR display
- J** REW (Rewind) button
- K** FF (Fast Forward) button

Remote Controller

V-208EG, V-408EG, V-208CZR

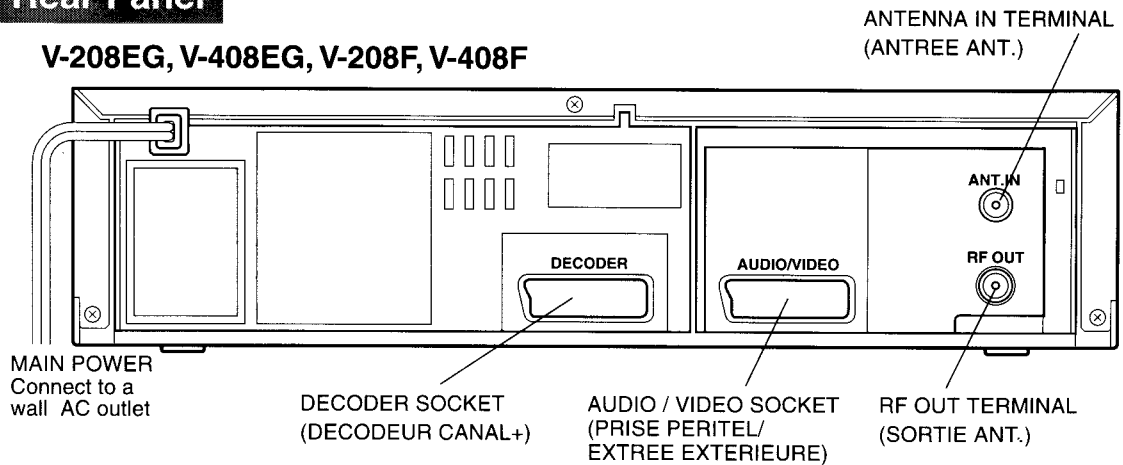
V-208F, V-408F



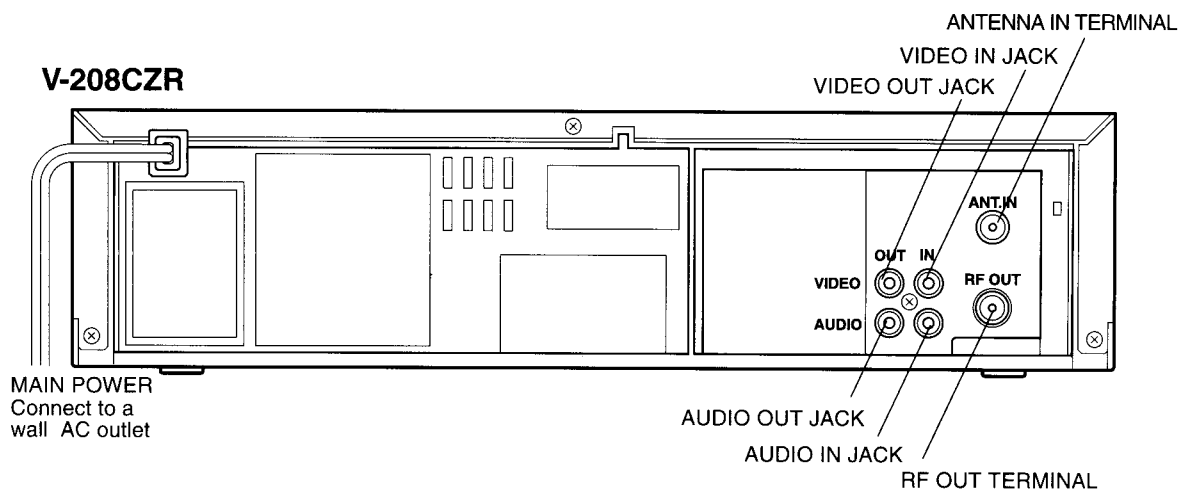
- | | | | |
|--|--|--|--|
| 1 INPUT SELECT (SOURCE) button | 6 SHOWVIEW button (Except V-208CZR) | 12 CH/TRK (PROG. TV) buttons | 17 SP/LP button (Except V-208F) |
| 2 Number buttons (0 - 9) | 7 REC (ENR.) buttons | 13 COUNTER (COMPT.) button | 18 FF (AV. RAP.) button |
| 3 DISPLAY button | 8 REW (RET. RAP.) button | 14 C. RESET (ZERO COMPT) button | 19 PLAY (LECT.) button |
| 4 CANCEL (ANNUL.) button | 9 SLOW (RALENTI) button | 15 SHIFT buttons | 20 PAUSE button |
| 5 MENU (OSP) button | 10 TV/VIDEO button | 16 TIMER (AUTO) buttons | 21 STOP (ARRET) button |
| 11 ON / STANDBY (MARCHE) button | | | |

Rear Panel

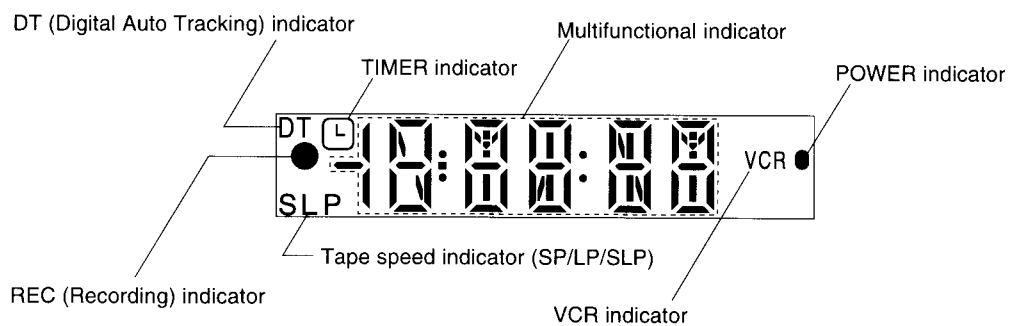
V-208EG, V-408EG, V-208F, V-408F



V-208CZR



VTR Display



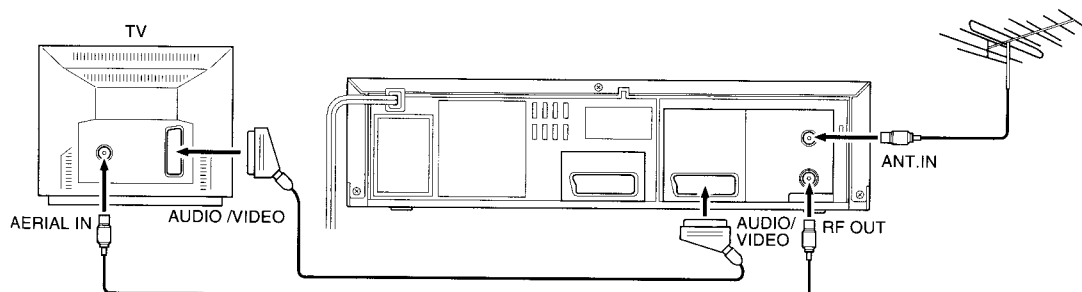
CONNECTIONS (V-208EG, V-408EG, V-208F, V-408F)

Before you use this VTR, it is necessary to connect it to your TV.

Connection to your TV

Connect the VTR to the main antenna and the TV with an antenna cable.

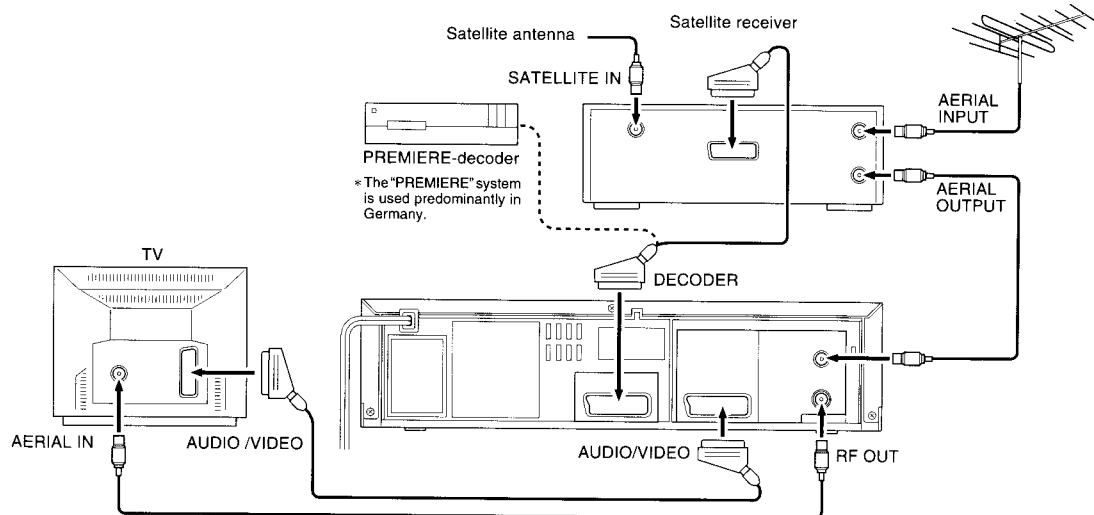
■ To receive TV channels only



Note

If your TV has a SCART socket, use a SCART cable (not supplied) to connect the VTR.

■ To receive Satellite and TV channels



Notes

- If both the TV and the satellite receiver have SCART sockets, use a SCART cable (not supplied) to connect the VTR.
- To connect a PREMIERE decoder to the VTR or TV, use an RGB SCART cable (full connection type, commercially available).

Switch on the satellite receiver or the PREMIERE decoder.

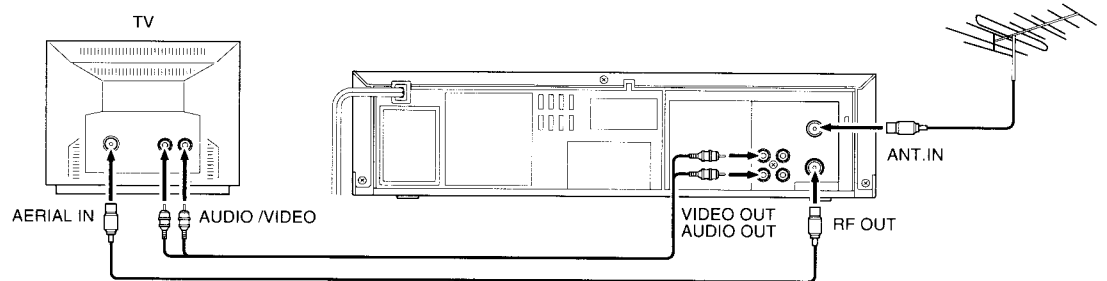
CONNECTIONS (V-208CZR)

Before you use this VTR, it is necessary to connect it to your TV.

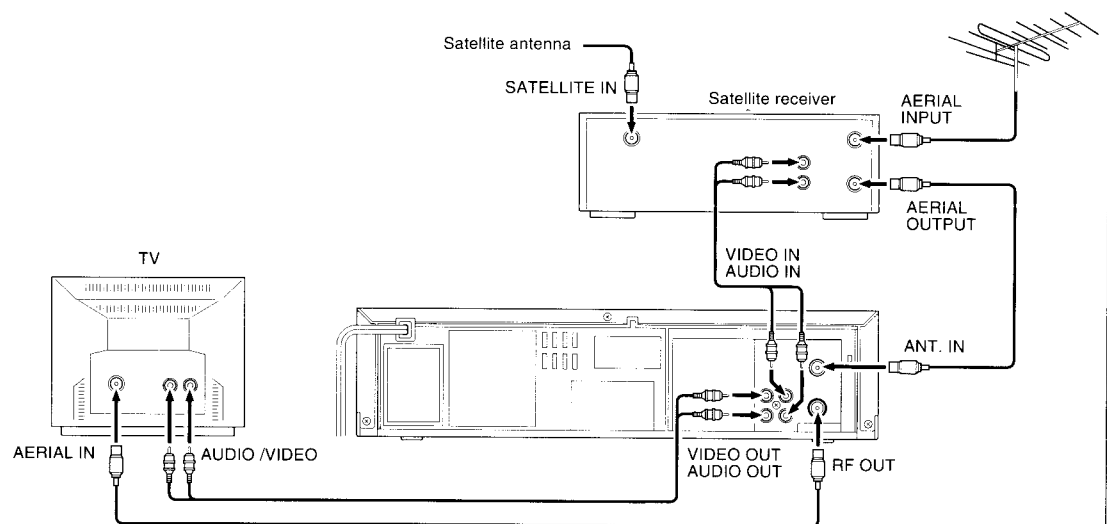
Connection to your TV

Connect the VTR to the main antenna and the TV with an antenna cable.

■ To receive TV stations only



■ To receive Satellite channels as well



Note

- If both your TV and the satellite receiver have a RCA socket, use a RCA cable (not supplied) to connect the VTR.

2 PREPARATION WATCHING THE VIDEO PICTURE

The way you operate this VTR to watch a video picture depends on whether you use a SCART cable or not.

For SCART Cable Users

■ To watch a video picture from the VTR

Insert a cassette and press the **PLAY** button on the remote controller or front panel of the VTR.

19

D

■ To watch or record a programme from the connected satellite receiver

Press the **INPUT SELECT** button so that "L1" or "L2" indicator appear in the VTR display. (See page 1-21)

1

For Non-SCART Cable Users (Setting the Video Channel)

The VTR signals are sent to your TV from the RF OUTPUT socket. Your TV must have a channel set aside exclusively for these VTR signals. This is called the video channel.

1 Turn on the TV.

2 Select a free channel on the TV which you wish to use for your video picture, for example channel 9. This channel 9 will be only used for watching a video picture.

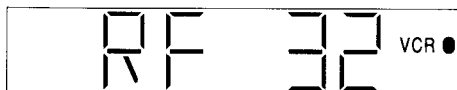
3 Press the **ON/STANDBY** button to turn on the VTR.

11

A

4 Hold down the **MENU** button for more than 5 seconds.

5

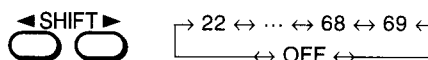


VTR display

Note on the RF Out Channel

- If you couldn't find the **INSTALLATION MENU** screen or not clear and makes noise, press the **SHIFT** button in step 4 to select the desired channel number. The number changes in the VTR display as follows.

15



After selecting the number, re-tune the TV and confirm the screen is shown clearly.

Note

The RF out channel cannot be changed during recording/playback or when external input ("L1" or "L2" is displayed) is selected. In the case of V-208F and V-408F models, the "AU1" or "AU2" is displayed while for V-208CZR model, "L" is displayed.

Button selection system according to the following countries:

Press number button 2 to select "L" or "G" on the screen according to the TV system of your country.

L : France

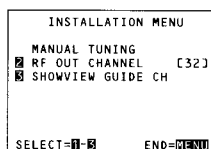
G : Germany, Italy, Switzerland and the Middle and Near East countries

K : Russia, Czech, Slovakia, Hungary, etc.

Note

If the setting is made incorrectly, a clear picture or sound is not obtained.

Tune the TV channel (e.g. channel 9) to see the following **INSTALLATION MENU** screen. Now save this channel on your TV, you will need to select this channel every time you play a video or want to set a timer recording.



5 Press the **MENU** button. Video channel setting is complete.

5

2

PREPARATION

INITIAL SET UP

The initial set up procedure will help an additional TV station storing or clock resetting, etc.
This VTR can store up to 99 positions for TV stations.

Language Setting

Information

- It is necessary to preset the LANGUAGE you want to use for the on-screen display before making any setting such as clock setting or storing of TV stations.
- LANGUAGE setting is required when the VCR is first connected to an AC power source or after a power failure has occurred.

Press **number button 1~4** to select a language.

In the case of V-208CZR model, either English, Russian or Polish language can be selected.

1 DEUTSCH
2 ENGLISH
3 FRANÇAIS
4 ITALIANO
WAHLEN=1-4
SELECT=1-4
SELECTION=1-4
SCEGLIERE=1-4

The Language can be changed after the setting.
See "Optional Setting" on page 1-17.

Clock Setting

Example To set the clock to 14:30
August 25, 1998

1 Press the **MENU** button to display the MAIN MENU screen.

2 Press **number button 4** to select "CLOCK SET".

4

1. 1. '98 TH
HOUR MIN. DATE MONTH YEAR
END=MENU

3 Set the hours and minutes. (24 hours clock format)

1 → 4 → 3 → 0

14:30 1. 1. '98 TH
HOUR MIN. DATE MONTH YEAR
END=MENU

4 Set the day and month.

2 → 5 → 0 → 8

14:30 25. 8. '98 TU
HOUR MIN. DATE MONTH YEAR
END=MENU

5 Set the year with its last two digits.

9 → 8

14:30 25. 8. '98 TU
HOUR MIN. DATE MONTH YEAR
END=MENU

6 Press the **MENU** button.
Now the clock starts.

MENU

MAIN MENU
1 TIMER PROGRAMMING
2 USER SETTING
3 INSTALLATION
4 CLOCK SET
SELECT=1-4 END=MENU

7 Press the **MENU** button again to exit.

To make corrections:

Press the **SHIFT** (◀) button to move back to the item, or the **SHIFT** (▶) button to move forward.

Storing of TV Stations

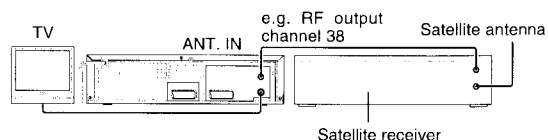
This procedure is specifically for V-208EG and V-408EG model. Storing of TV stations differs according to each area.

Example Storing ARD on channel 26 of a PAL B/G in memory position number 1 on your VTR.

The allocation of television channels in memory of the VTR is generally as follows for SHOWVIEW recording.

Example

ARD: Position number 1
ZDF: Position number 2
WEST 3: Position number 3
RTL: Position number 4
Satellite: Position number 6, for example (if the RF cable is connected as shown below)



In this case, select position number 6 at Step 4 and channel 38 at Step 5 if the output channel for the satellite receiver is 38.

Ensure that the TV is receiving a satellite signal. When watching or recording a satellite programme, select position number 6.

Important (V-208EG and V-408EG)

This procedure can be performed only when the VTR display shows a position number on the VTR. If the "L1" or "L2" is displayed, press the **INPUT SELECT** button so that the position number appears.

INPUT SELECT

L1 → L2 → P 1
Position number

In the case of V-208F and V-408F models, the "AU1" or "AU2" is displayed while for V-208CZR model, "L" is displayed.

1 Press the **MENU** button to display the MAIN MENU screen. **5**

2 Press **number button 3** to select "INSTALLATION". **2**

3 Press **number button 1** to select "MANUAL TUNING". **2**
The VTR is now in the tuning mode.

Note

MANUAL TUNING cannot be operated during recording/playback or when external input ("L1" or "L2" is displayed) is selected.

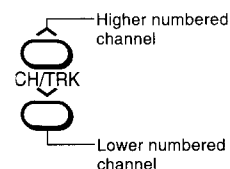
In the case of V-208F and 408F models, the "AU1" or "AU2" is displayed while for V-208CZR model, "L" is displayed.

4 Press the **SHIFT** button to select position number 1. **15**



CH P. :	CH
1 :	26
2 :	69
3 :	--
4 :	--
5 :	--
CH P. = SHIFT	CANCEL = 2
CH = CH/VR	END = MENU

5 Press and hold the **CH/TRK** button to start searching for channel 26. **12**

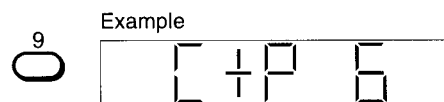


CH P. :	CH
1 :	26
2 :	69
3 :	--
4 :	--
5 :	--
CH P. = SHIFT	CANCEL = 2
CH = CH/VR	END = MENU

If the received TV signal is not channel 26, press and hold the **CH/TRK** button again.

■ Storing PREMIERE channels

When you have located the PREMIERE channel using this procedure, press **number button 9**. When a decoder position is found with **CH/TRK** or **number buttons**, the display C+ will appear on the VTR display. **2**



For the V-208F/V-408F models, select the TV System. When SECAM is selected, "PAL" is not displayed on the screen.

6 Repeat Steps 4 and 5 for other TV channels and for satellite channels. Select the position numbers in Step 4 as follows:

ZDF	Position number 2
WEST 3	Position number 3
RTL	Position number 4
Satellite	Position number 6

Make a note of all the memory position numbers stored in the VTR on page 12 so you are ready for SHOWVIEW recording.

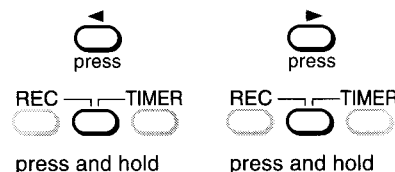
7 Press the **MENU** button. Channel tuning is now finished. **5**

Once station storing is done, you can select a TV programme by the position number on which the TV station is stored.

If a clear picture does not appear on the TV screen after channel tuning is finished, make fine adjustment function.

Press the **SHIFT** buttons with holding the "F" button. **15**

If the picture is monochrome Best picture If the stripes appear



Skipping Channels

You can prevent the use of certain position numbers.

- 1) Set the VTR to the tuning mode following steps 1 to 4 of the station storing procedure.
- 2) Select the position number you want to skip with the **SHIFT** button. **15**

Example To skip position number 4.



CH P. :	CH
1 :	26
2 :	33
3 :	23
4 :	30
5 :	36
CH P. = SHIFT	CANCEL = 2
CH = CH/VR	END = MENU

- 3) Press **number button 3**. The following indication will appear with the skip function on. **2**



CH P. :	CH
1 :	26
2 :	33
3 :	23
4 :	30
5 :	36
CH P. = SHIFT	CANCEL = 2
CH = CH/VR	END = MENU

Skip function on

If you press **CH/TRK** button, the TV channel number will appear and the skip function will be cancelled. (skip function off) **12**

- 4) Press the **MENU** button to exit. **5**

Information

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graph TD
    A[Clock Setting (page 1-6)] --> B[Storing of TV Stations in the VTR (page 1-7)]
    B --> C[SHOWVIEW Preparation (page 1-8) (GUIDE CHANNEL settings)]
    C --> D[SHOWVIEW Recording (page 1-13)]
  
```

* Position number where the television channel has been stored in your VTR. (Page 1-7.)

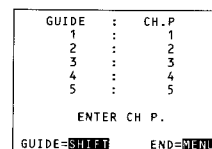
[illegible]

This procedure is specifically for V-208EG model. Setting of Guide Channel differs according to each area.

Preparation

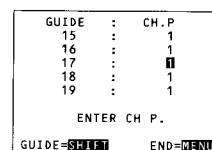
- Select the video channel on the TV or set the input selection switch on the TV to video in.
- Set the video system correctly. (Page 1-10)

- 1** Press the **MENU** button to display the MAIN MENU on the screen. **5**
- 2** Press **number button 3** to select "INSTALLATION". **2**
- 3** Press **number button 3** to select "SHOWVIEW GUIDE CHANNEL". **2**



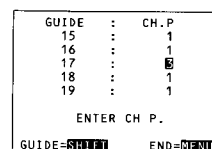
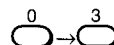
- 4** Press the **SHIFT** buttons to select a **GUIDE CHANNEL** in accordance with the Table shown on the left. **15**

Example : Set GUIDE CHANNEL 017 for WEST 3.



- 5** Enter the memory position number (1 to 99) under which the TV channel is to be entered in the VTR in the "CH P" column.

Example : For WEST 3 in position number 3, use the number buttons to enter a 3 in the “CH P” column.



- 6** To set the GUIDE channel for other TV channels, follow Steps 4 and 5.

- 7** Press the **MENU** button twice to return to a normal TV picture.
The **GUIDE CHANNEL** settings are now complete.

ON SCREEN DISPLAY

This is basic information for the playback operation.

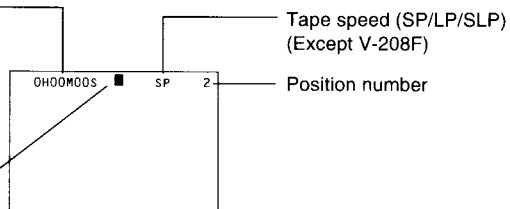
Displays and indicators on the Screen

Pressing the **DISPLAY** button makes the operating mode appear. If you press this button again, the indication goes off, leaving the counter indication on the screen. To turn it off, press the **DISPLAY** button once more. **3**

Counter indication

- Linear time counter
- Clock

Each time the **COUNTER** button is pressed, the indication changes. (For details, see page 1-17)

13

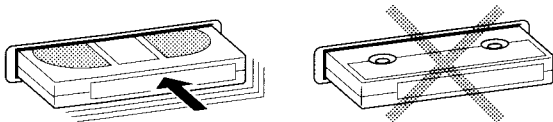
The indicator varies with the operating mode.

Ejecting a tape	▲
Stop	■
Fast-forwarding	▶▶
Rewinding	◀◀
Recording	●
Recording pause	⏸
Playback	▶

Video Cassette Use

■ Loading a Cassette

Push the cassette into the cassette compartment with the window side facing up and the label side towards the front. The VTR is automatically turned on.



■ Ejecting a Cassette

Press the **EJECT** button. The cassette is ejected from the cassette compartment.

Warning

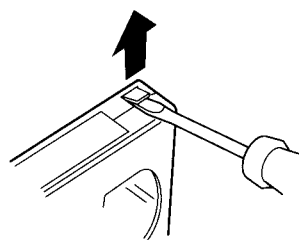
Do not insert your hands or any foreign objects into the compartment. This may result in injury or damage. Take special care with children to avoid accidents.

Precautions When Using Video Cassettes

Video cassettes have a safety tab to prevent accidental erasure. If the tab has been removed, recording cannot be performed.

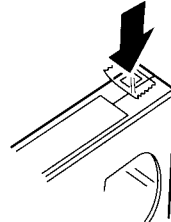
■ To prevent accidental erasure

Remove this safety tab with a screwdriver.



■ To record again

Cover the tab hole with adhesive tape.



- Avoid exposing cassettes to direct sunlight. Keep them away from heaters. Avoid extreme humidity, vibrations or shock, strong magnetic fields (near a motor, transformer or magnet) and dusty places.

Setting Video System (PAL/MESECAM)

It is necessary to set the video system (PAL/MESECAM) properly to make a recording or playback of recorded tapes. Set the "PAL/MESECAM" according to the television system of a TV programme you want to record or the video system of a tape you want to play back.

■ Video systems compatible with this VTR.

PAL tape: Tapes recorded in the PAL video system commercially available in the market, and tapes on which PAL broadcast programmes were recorded.

MESECAM tape: Tapes on which SECAM broadcast programmes were recorded with a MESECAM system VTR.

Preparation

- Turn on the VTR.
- Select the video channel or video input mode on the TV.



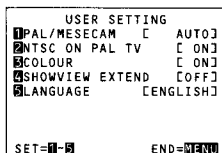
- Normally, you do not need to change the setting from **PAL/MESECAM: [AUTO]**.
- Only if the colour deteriorates, no colour, or the sound is strange; due to a weak signal or interference. Use the following procedure to set the system to [PAL] or [MESECAM].

1 Press the **MENU** button to display the MAIN MENU screen. **5**

2 Press **number button 2** to select "USER SETTING". **2**

3 Press **number button 1** to set "PAL/MESECAM MODE". **2**

1



Each time you press the button, "PAL→MESECAM→AUTO" appears.

4 Press the **MENU** button twice to return to the normal TV screen. **5**

When Recording/Watching TV

Television system	PAL/MESECAM setting
PAL B/G, DK (Germany, Italy, Switzerland, etc.)	[AUTO] or [PAL]
SECAM B/G (Middle and Near East countries)	[AUTO] or [MESECAM]
SECAM D/K (Russia, Czech, Slovakia, Hungary, etc.)	[AUTO] or [MESECAM]

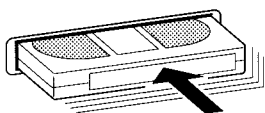
When Playback

Video system of a playback tape	PAL/MESECAM setting
PAL tapes	[AUTO] or [PAL]
MESECAM tapes	[AUTO] or [MESECAM]
SECAM tapes	[AUTO] or [SECAM]

Basic Playback**Preparation**

- Select the video channel or video input mode on the TV.

- 1** Load a recorded cassette. Power is turned on. If the cassette has no safety tab, playback starts automatically. C



- 2** Press the **PLAY** button to start playback. 19 D



In the case of V-208F and V-408F models, "LECT" is displayed instead of "PLAY".

- 3** To stop playback, press the **STOP** button. 21 E

**Play back and recording with the LP tape speed**

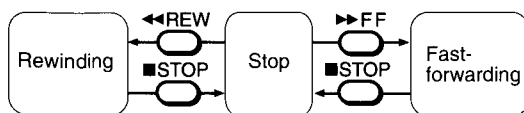
When playing back a tape that has been recorded on another VTR, it may happen that the picture colour disappears, the picture becomes unstable and that noise occurs. It is therefore recommended that tapes that have been recorded on this VTR also are played back on this VTR.

Note

TVs connected via SCART cables normally select the video input mode automatically when the PLAY button is pressed.

Rewinding / Fast-forwarding

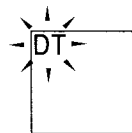
To rewind or fast-forward the tape, press the **REW** or **FF** button in the stop mode as follows. 8 18



You can view pictures at various tape speeds. See page 1-19.

Adjusting the Tracking**Digital Auto Tracking**

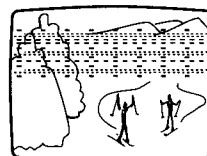
When playback starts, the VTR automatically adjusts the tracking for clear pictures and sound. The "DT" indicator blinks during the adjusting.

**Notes**

- During the adjusting, the playback picture and sound may be distorted.
- The digital auto tracking is activated only in the playback mode.

Adjusting the tracking manually

If the VTR cannot locate the best possible tracking point, hold down one of the **CH/TRK** buttons until you obtain the best possible picture and sound. 12

**Notes**

- To reset the tracking point to the centre, press both the **CH/TRK** buttons simultaneously. 12 G
- To resume the digital auto tracking, hold down both the **CHANNEL** buttons on the VTR simultaneously for about 2 seconds.
- The noise on the screen may not be completely eliminated depending on the tape used, especially when the tape was recorded on another VTR.

3

BASIC OPERATION RECORDING

This section explains the basic recording operation.

Recording a TV Programme

Preparation

- Turn on the VTR.
- Select the video channel or video input mode on the TV.

1 Load a cassette with the safety tab attached. **C**

2 Press the **TV/VIDEO** button so that the "VCR" indicator appears in the VTR display. **10**

TV/VIDEO




3 Select the TV programme (position number) to record with the **CHANNEL** buttons on the VTR, or the **CH/TRK** buttons or **number buttons** on the remote controller. **G 12 2**

CH/TRK




If "L1" or "L2" is displayed in the VTR display, press the **INPUT SELECT** button so that the position number appears. **1**
In the case of V-208F/408F models, the "AU1" or "AU2" is displayed while for V-208CZR model, "L" is displayed.

4 Press the **SP/LP** button to select the recording tape speed. **17**

SP/LP




SP : Suitable for general recording with better picture and sound quality.

LP : Suitable for doubling recording time, but with less picture and sound quality than using the SP tape speed.

5 Press the **REC** button on the VTR, or simultaneously press the two **REC** buttons on the remote controller. **B 7**
Recording starts.

REC — TIMER




6 Press the **STOP** button to stop recording. **21 E**

Watching a TV Programme While Recording Another

- 1) While recording, press the **TV/VIDEO** button so that the "VCR" indicator if displayed disappears in the VTR display. **10**
- 2) Choose another channel using the channel selector on the TV.

Note

To monitor the programme which is being recorded, press the **TV/VIDEO** button so that the "VCR" indicator will appear in the VTR display. Select the video channel or video input mode on the TV. **10**

Skipping Unnecessary Scenes While Recording

Press the **PAUSE** button to stop recording momentarily. **20**
To resume recording, press the **PAUSE** button again.

Note

The VTR automatically shifts to the stop mode if the recording pause mode continues for 10 minutes.

SHOWVIEW RECORDING (Except V-208CZR)

You can easily programme a recording simply by entering the SHOWVIEW number. The numbers are published in the TV listings of newspapers, TV guide magazine, etc.

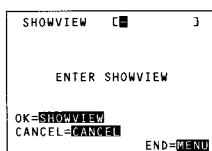
SHOWVIEW Recording

Preparation

- Turn on the VTR.
- Select the video channel or video input mode on the TV.
- Make sure that the clock is set correctly.
- Make sure that the TV stations have been stored properly (See page 1-6).

- 1** Press the **SHOWVIEW** button.
The VTR enters the SHOWVIEW mode.

SHOWVIEW

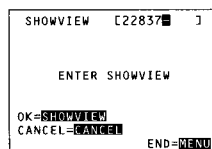


- 2** Enter the SHOWVIEW number.

Example : To record a TV programme beginning at 21:30 on August 30, 1998 with SHOWVIEW number 22837 (fiction).

Press number button 2, 2, 8, 3 and 7.
Confirm that the entered number is correct.

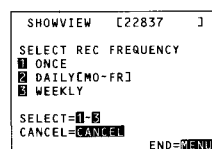
2 2 8 3 7



- To correct the number, clear all digits by pressing the **CANCEL** button and re-enter a number.

- 3** Press the **SHOWVIEW** button.
The TV screen changes as follows:

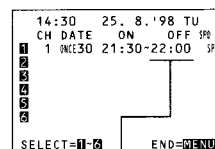
SHOWVIEW



- ONCE** : One-time recording
DAILY [MO-FR] : Records TV programmes on the same TV channel at the same time Monday through Friday.
WEEKLY : Records TV programmes on the same TV channel at the same time on the same day every week.

- 4** To select "ONCE" for example, press **number button 1**. The "ONCE" programming has been made automatically.
Programme details are shown.

1



Ex. If you set 10 minutes time extension on the USER SETTING screen (see below), "OFF" displays 22:10.

- 5** To change the tape speed, press the **SP/LP** button. (Except V-208F)

- 6** Press the **SHOWVIEW** button.
The programme setting is now memorized.

- 7** To enter another SHOWVIEW numbers, repeat steps 2 to 6.

- 8** Finally press the two **TIMER** buttons simultaneously. The VTR enters the timer standby mode and the indicator lights up.

REC — TIMER



Setting Time Extension

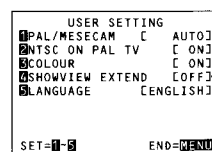
Before making a SHOWVIEW recording, set possible time extension for the recording to allow for programme's overrun. You can extend the recording time in 10 minute increments up to 60 minutes.

- 1) Press the **MENU** button to display the MAIN MENU screen.

- 2) Press **number button 2** to select "USER SETTING".

- 3) Press **number button 4** repeatedly to set desired time extension.

4



OFF ← 60 ← 50 ← 40 ← 30 ← 20 ← 10 ←

- 4) Press the **MENU** button twice to exit.

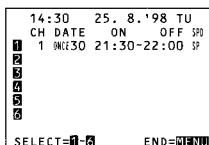
Notes

- Extend time should be set before starting SHOWVIEW recording procedure.
The time extending doesn't work on recording programmes already memorized.
- When you do not use time extension for SHOWVIEW recording, set to "OFF" on the USER SETTING screen.

Confirming the SHOWVIEW Timer Programme

- Before the VTR enters the timer standby mode
(□ indicator not lit)

- 1) Press the **MENU** button to display the MAIN MENU screen. **5**
- 2) Press **number button 1** to select "TIMER PROGRAMMING". **2**

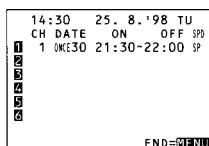


Check the programmed data.

- 3) Press the **MENU** button twice to exit. **5**

- During the timer programme recording
(□ indicator lit)

Press the **MENU** button.
The screen for confirming appears.



After about 30 seconds, the screen disappears.

Cancelling the SHOWVIEW Timer Programme

- 1) If the □ indicator is lit, press the two **TIMER** buttons to turn it off, and turn on the VTR by pressing the **ON/STANDBY**. **16**
11
- 2) Press the **MENU** button to display the MAIN MENU screen. **5**
- 3) Press **number button 1** to select "TIMER PROGRAMMING". **2**
- 4) Select a program number which you want to cancel by using **number buttons**. **2**
- 5) Press the **CANCEL** button. **4**
The line is cleared out.
- 6) Press the **MENU** button. **5**

Recording or Playback in the Timer standby Mode

First press the two **TIMER** buttons to release the timer standby mode, and then press the **ON/STANDBY** button to turn on the VTR. The VTR will be available for use.

- Be sure to press the two **TIMER** buttons again to return the VTR to the timer standby mode after you operate.

16
11

If a Power Failure Occurs During the Timer Programme Recording

- When a power failure has occurred, "---:--:--" appear in the VCR display. Since the programmed contents have been cleared, reset the clock and timer programming.
- When power has failed for a short time, the colon of the current time display blinks. The programmed contents are not affected. Reset the clock.

Error Indicators

When the "FULL" message appears on the TV as **SHOWVIEW** is pressed, no more programmes can be entered. If you want to add another programme, select one existing programme on the screen by using number buttons, and press the **CANCEL** button to delete it. **4**

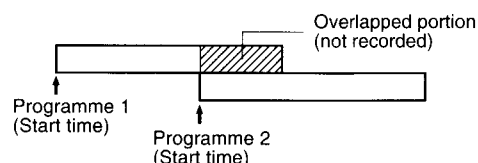
If impossible SHOWVIEW number is entered, "ERROR" blinks on the screen to tell you that the recording cannot be performed. Press the **CANCEL** button to clear the SHOWVIEW numbers and enter correct one. **4**

If "CLASH" message appears on the screen during programming, it tells you that two programmes with the same recording start time have been entered. You have to make a correction. On this screen, blinking item number means that the item has been entered later.

- 1) Enter the number of the programme you want to correct using **number buttons**. **2**
- 2) Correct the timer programme data, or clear the data by pressing the **CANCEL** button and then press the **SHOWVIEW** button to enter the SHOWVIEW number. **4**
6

Overlaps of the programmes

If two programmes overlap, the recording start time of programme 2 has priority over the recording end time of programme 1.



TIMER PROGRAMME RECORDING

The programmable timer allows you to record up to 6 different programmes over one month.

Timer Programming Procedure

Preparation

- Select the video channel or video input mode on the TV.
- Turn on the VTR.
- Make sure that the clock is set correctly. (See page 1-6)

Example

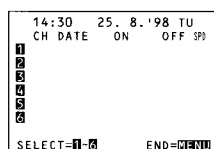
To record a programme of a station stored on position number 1 in the SP tape speed from 21:30 until 22:00 on August 30. Today is August 25.

1 Load a cassette with the safety tab attached. **C**

2 Press the **MENU** button. **5**
The MAIN MENU screen appears.

3 Press number button **1** to select "TIMER PROGRAMMING". **2**

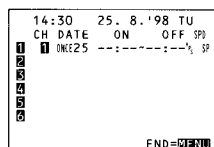
1



Programme number 1 is ready to accept your input.

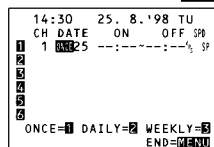
4 Select an empty programme number using number buttons **1** to **6**. **2**

1



5 To select position number 1, press number button **0** and **1**. **2**

0 → 1



- If you record from the connected external equipment, make "L1" or "L2" appear by pressing the **INPUT SELECT** button as follows: **1**

L1: Via the AUDIO/VIDEO socket on the rear panel.
L2: Via the DECODER socket on the rear panel.

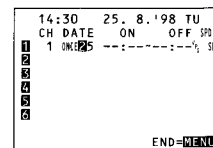
In the case of V-208F and V-408F models, the "AU1" or "AU2" is displayed while for V-208CZR model, "L" is displayed.

To make corrections:

Press the **SHIFT** (◀) button to move back to the item, **15**
or the **SHIFT** (▶) button to move forward.

6 Selected frequency of recording. (e.g. once) **2**

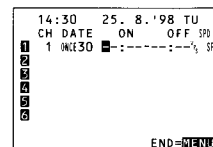
1



You can also set daily or weekly timer programme recordings. (See next page.)

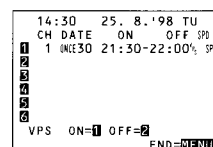
7 Set the recording date. **2**

3 → 0



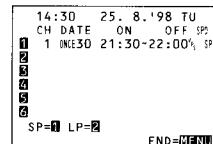
8 Set the recording start time and the off time. **2**

2 → 1 → 3 → 0
2 → 2 → 0 → 0



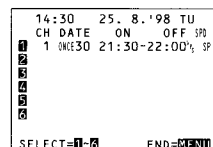
9 Set the VPS (ON). **2**

1



10 Select the tape speed (SP). (Except V-208F) **2**

1



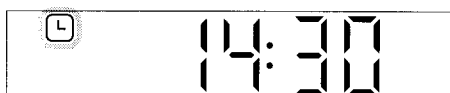
To set another programme, follow steps **4** to **10**.
In step **4**, select next programme number.

11 Press the **MENU** button. **5**
Now programming is complete.

12 Press the two **TIMER** buttons simultaneously. **16**

REC — TIMER

The power turns off and the VTR enters the timer standby mode.



Daily and Weekly Recording

■ Daily recording

You can record TV programmes on the same channel at the same time Monday through Friday. Press **number button 2** for "DAILY" in step 6.

2

■ Weekly recording

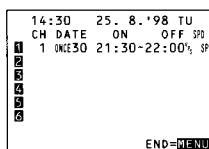
You can record TV programmes on the same channel on the same day and time every week. Press **number button 3** for "WEEKLY", then **number button 1** to 7 to select a day of the week in step 6.

2

Confirming the Timer Programmes (During the Timer Programme Recording)

Press the **MENU** button.
The screen for confirming will appear.

5



After about 30 seconds, the screen disappears.

Changing/Cancelling the Timer Programmes

- 1) If the indicator is lit, press the two **TIMER** buttons to turn it off, and then turn the VTR on by pressing the **ON/STANDBY** button.

16

11

- 2) With steps 2 to 11, change the items.
 - To cancel a programme, select the programme number you want to cancel in step 4, and press the **CANCEL** button. The line is then cleared.

4

- 3) Press the two **TIMER** buttons to return to the timer standby mode.

16

Recording or Playback in the Timer Standby Mode

First press the two **TIMER** buttons to release the timer standby mode, and then press the **ON/STANDBY** button to turn on the VTR. The VTR will be available for use.

16

11

- Be sure to press the two **TIMER** buttons again to return the VTR to the timer standby mode after you have finished.

16

Error Indication

- The "Error (— E —)" indicator appears in the VTR display if you press the **TIMER** buttons when:
 - a cassette is not loaded.
 - the loaded cassette has no safety tab.
 - no timer programme is set.
 In these cases, a recording can not be made.

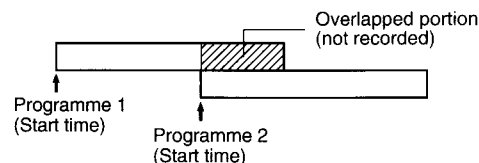
16

If a Power Failure Occurs During the Timer Program Recording

- When a power failure has occurred, "—:—:—" appear in the VTR display. Since the programmed contents have been cleared, reset the clock and timer programming.
- When power has failed for a short time, the colon of the current time display blinks. The programmed contents are not affected. Reset the clock.

Overlaps of the programmes

If two timer programmes overlap, the recording start time of programme 2 has priority over the recording off time of programme 1.



VPS (Video Programme System) V-208EG and V-408EG

Depending on TV stations, VPS signals are transmitted with TV programmes. The VTR can control the timer recording start and end times by the VPS signals to assure the recording of a whole programme, covering any changes in the published broadcast time, that is, time shift, extension or interruption of the programme. If the TV programme is interrupted during the VPS controlled timer recording, the recording will be automatically interrupted and resumed when the programme continues.

Important

The VPS function only works when the VPS signal is transmitted with the TV programme to be recorded. If the broadcasting station does not transmit the VPS signal, the timer recording will be done in the normal mode even if it was programmed in the VPS mode.

OPTIONAL SETTINGS/COUNTER FUNCTION

These functions will help your playback.

Optional Settings

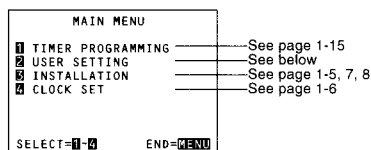
You can easily make necessary settings using the on-screen display

Preparation

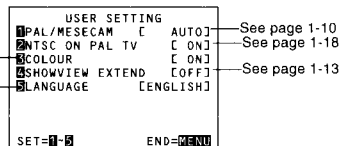
- Turn on the VTR.
- Select the video channel or video input mode on the TV.

- 1** Press the **MENU** button.
The MAIN MENU screen appears.

MENU



- 2** Press **number button 2** to select "USER SETTING".
For details on each item, refer to pages respectively as below:



Press the **number button 5** to change the language.

Press **number button 3** to select "OFF", if the TV programme or the tape is monochrome.

In the case of V-208F and V-408F models, the "AU1" or "AU2" is displayed while for V-208CZR model, "L" is displayed.

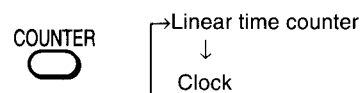
- 3** Press the **MENU** button twice to return to exit.

Counter Function

You can view the clock or linear time counter in the VTR display or on the TV screen.

Counter Displays

Each time you press the **COUNTER** button, the VTR display changes in sequence as follows:



The indication above will also appear on the TV screen by pressing the **DISPLAY** button. They are switchable with the **COUNTER** button.

To reset the linear time counter to "0H00M00S"/"0:00:00" (VTR display)

The counter is automatically reset to "0H00M00S"/"0:00:00" (VTR display) when a cassette is ejected. If you want to reset at another point, such as the beginning of a new recording, just press the **C. RESET** button.

Notes

- The linear time counter does not work on non-recorded portions on the tape.
- When the tape is ejected or the VTR is turned off, the display changes to clock.
- If the tape rewinds back over "0H00M00S"/"0:00:00" (VTR display), "—" appears in the VTR display.
- The displayed time of the linear time counter is only an approximation.



ADVANCED OPERATION

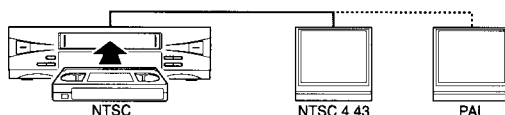
NTSC-RECORDED TAPE PLAYBACK

This VTR can play back an NTSC-recorded tape. You can watch the playback picture on a PAL system TV or an NTSC 4.43 system TV.

Setting for NTSC Playback

When you play back an NTSC-recorded tape on this VTR, make a setting on the USER SETTING screen according to your TV.

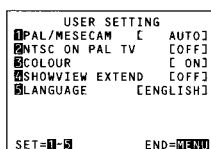
NTSC tape : tapes on which NTSC M system broadcasts mainly broadcast in the U.S. and Japan are recorded, and tapes recorded in the NTSC video system which are commercially available on the market.



Multi System TV (NTSC 4.43 compatible)

- 1** Press the **MENU** button to display the MAIN MENU screen. **5**
- 2** Press **number button 2** to select "USER SETTING". **2**
- 3** Set "NTSC ON PAL TV" to "OFF" by pressing **number button 2**. **2**

2

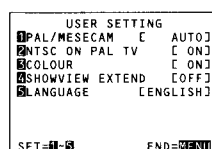


- 4** Press the **MENU** button twice to exit. **5**

PAL System TV

- 1** Press the **MENU** button to display the MAIN MENU screen. **5**
- 2** Press **number button 2** to select "USER SETTING". **2**
- 3** Set "NTSC ON PAL TV" to "ON" by pressing **number button 2**. **2**

2



- 4** Press the **MENU** button twice to exit. **5**

Note

With this VTR, an NTSC tape recorded in the SLP tape speed can be played back. But there are some points to be observed.

- The quality of the playback picture and sound are not clear.
- Variable speed playback (picture search, still, slow playback, etc.) can't be performed properly.
- Digital auto tracking may not be performed properly.

Notes for Using a PAL TV for NTSC Playback

- Use a TV compatible with PAL video signals of PAL 60 (525 lines).
When the TV, that is not compatible with PAL video signals of PAL 60, is used (when the TV, that is compatible only with PAL video signals of PAL 50 (625 lines), is used) NTSC playback pictures may roll up and down. This is not malfunction of the VTR or the TV. If your TV is equipped with a V-HOLD control, it may be possible to stop the rolling of pictures by adjusting this control.

About PAL 50 and PAL 60 of PAL video signals:

PAL 50 : is a normal signal and its PAL video signal is 50 fields (625 lines).

PAL 60 : is a special signal and its PAL video signal is 60 fields (525 lines).

Some TVs operate properly only with PAL 50 signals, some TVs operate properly with both PAL 50 and 60 signals.

Therefore, if your TV is switchable between PAL 50 (625 lines)/PAL 60 (525 lines), you can view an NTSC recorded tape in the PAL colour system with your own TV.

- Depending on the TV used, the picture may shrink vertically and black bars may appear both at the top and bottom of the TV screen. This is not an indication of malfunction.
- Variable speed playback (picture search, still, slow playback, etc.) may produce a skewed image and quite a bit of noise on the picture.
- If the tape pre-recorded in the SP tape speed mode is played back in the picture search mode, the picture may be reproduced with no colour.

Note

For viewing an NTSC-recorded tape, we recommend using an NTSC 4.43 TV.

Frame Advance

While the picture is frozen (see "Still Picture"), press the **PLAY** button repeatedly.
The picture advances one frame as you press the button.

19

D



To resume normal playback, press the **PAUSE** button.

20



Notes

- If you play back a tape recorded in the LP or SLP tape speed or a tape recorded on another VTR in various speed mode, the picture may be noisy or monochrome.
- When you use an NTSC-recorded tape, picture search and accelerated picture search, the slow-motion picture speeds are as follows.

	Picture search	Accelerated picture search	Slow-motion	
PAL (SP)	× 5	× 7	1/6	1/18
PAL (LP)	× 5	× 13	1/6	1/18
NTSC (SP)	× 5	× 7	1/6	1/18
NTSC (SLP)	× 15	× 21	1/6	1/18

VARIABLE SPEED PLAYBACK

You can play back a tape at various tape speeds.

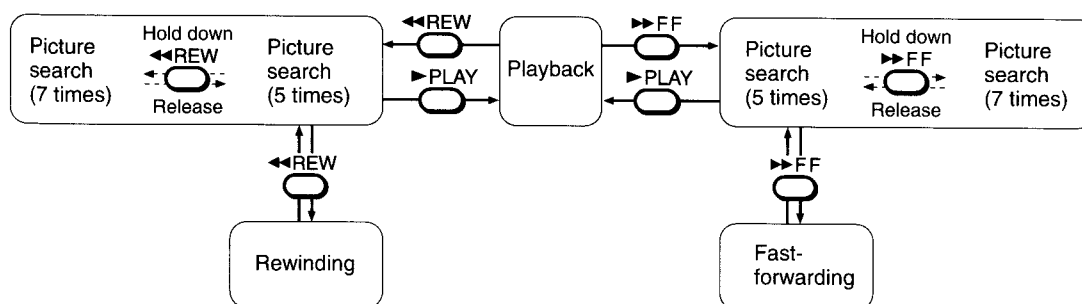
Variable Speed Playback

A variety of tape speeds are available on this VTR.

- Picture search** : Plays back at 5 times or 7 times the normal playback speed so that you can quickly locate a particular scene.
- Still picture** : Freezes the picture so that you can watch closer.
- Slow-motion picture** : Plays back at 1/6th or 1/18th the normal playback speed.
- Frame advance** : Advances the picture frame by frame.

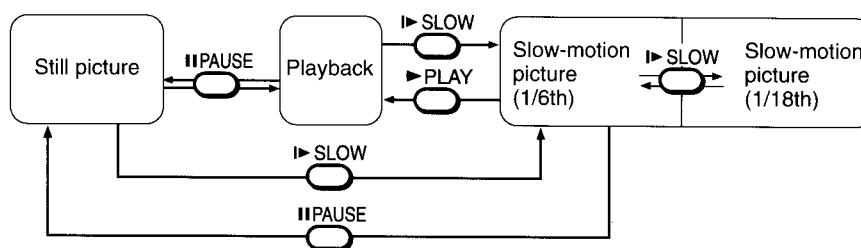
Picture Search

- While playing back a tape, press the **FF** or **REW** button. The tape runs at 5 times the normal playback speed. 18
- While playing back a tape, press and hold the **FF** or **REW** button. The tape runs at 7 times the normal playback speed. 8



Still Picture

- While playing back a tape, press the **PAUSE** button. The picture freezes. 20



Notes

- The still mode is automatically cancelled after about 5 minutes and returns to normal playback.
- The still picture may shake if a picture of a fast-moving object or scene is frozen. This is not a defect in the unit.

■ Adjusting Still Picture Stability

If the still picture is distorted or flickers, hold down one of the **CH/TRK** buttons until the picture becomes stable. 12



Note

The distortion of the still picture may not be eliminated completely.

Slow-motion Picture

- While playing back a tape, press the **SLOW** button. The tape runs at about 1/6th the normal playback speed. 9
- Each time the slow button is pressed, the speed changes. (1/6 th $\rightleftharpoons$ 1/18 th)

Notes

- The slow-motion picture mode is automatically cancelled after about 5 minutes and returns to normal playback.
- The slow-motion picture may flicker up and down. This is not a defect in the unit.

■ Adjusting the Tracking Manually

If the slow-motion picture is noisy, hold down one of the **CH/TRK** buttons until the best picture is obtained. 12



Note

The noise in the slow-motion picture may not be eliminated completely.

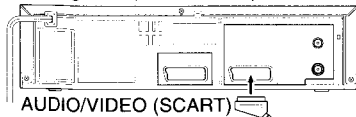
Variable recordings are available by connecting other equipment to the VTR.

Copying a Tape

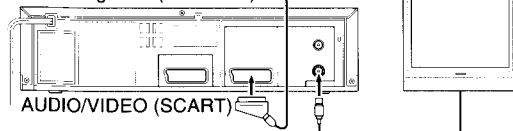
Using another VTR or external equipment, you can copy a tape.

V-208EG, V-408EG, V-208F, V-408F

Playing VTR (Another VTR)

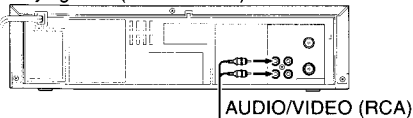


Recording VTR (Your VTR)

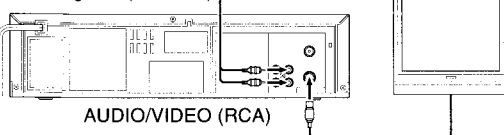


V-208CZR

Playing VTR (Another VTR)



Recording VTR (Your VTR)



Important

It is permissible to record television programmes only in the event that third party copyrights and other rights are not violated.

1 Press the **INPUT SELECT** button so that the VTR display shows "L1" or "L2" depending on your connection.

- When using the AUDIO/VIDEO socket.
- When using the DECODER socket.



In the case of V-208F and V-408F models, the "AU1" or "AU2" is displayed while for V-208CZR model, "L" is displayed.

2 Press the **SP/LP** button to select the recording tape speed. (Except V-208F)

3 Play the tape on the playback VTR and press the **REC** buttons to start recording on this VTR.

4 Press the **STOP** button on each VTR when copying is finished.

Notes

- The picture quality of the copied tape is slightly less than the original picture quality.
- When monitoring a picture being recorded, press the **TV/VIDEO** button to make the "VCR" indicator appear in the VTR display and select the video channel on the TV.

Memo

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SECTION 2 ADJUSTMENT PROCEDURES

1. SUMMARY

1. REMOVING THE TOP COVER AND FP ASSY (FIGURE 1)

- ① Remove the screws.
- ② Remove the Top Cover.
- ③ Remove the FP Assy, held in position by the eight prongs, the direction of arrow.

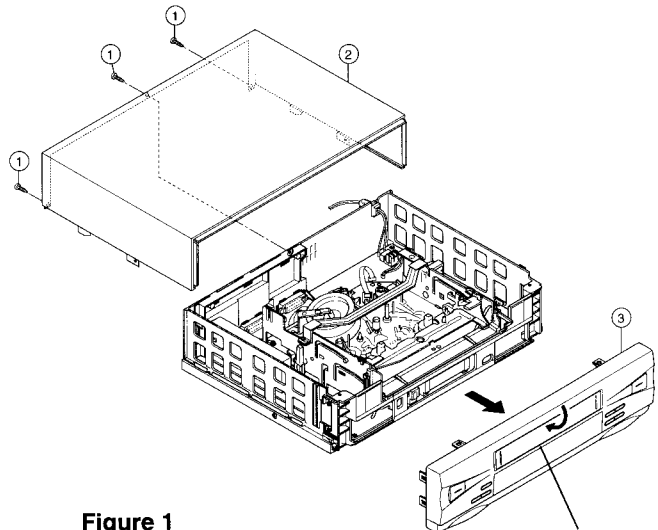


Figure 1

* Attach the Face Plate with the Dust Cover pushed open.

2. REMOVING THE DECK MECHANISM AND THE MAIN PCB FROM THE CHASSIS (FIGURE 2)

- ④ Remove the screws.
- ⑤ Disconnect the Flexible Wire from the CTL Head PCB.
- ⑥ Disconnect the QS-Connector from the Motor PCB.
- ⑦ Disconnect the Flexible Wire of Cylinder Head from the Connector-Post on the Main PCB.
- ⑧ Remove the Deck Mechanism
- ⑨ Remove the MAIN PCB from the some prongs on the chassis.

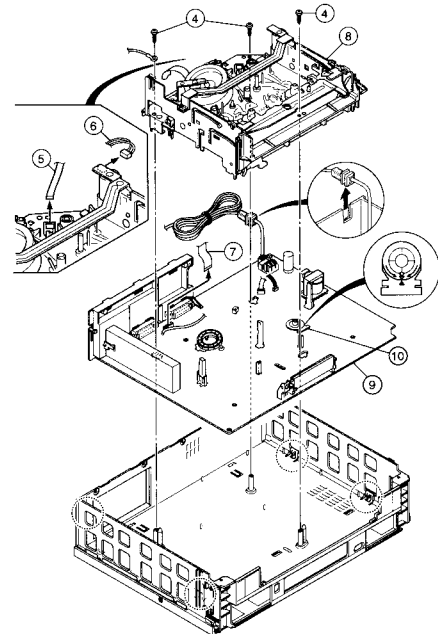


Figure 2

3. RE-ASSEMBLING PROCEDURE

- ⑩ Adjust the position of the “▼” and “▲” mark.

Follow the reverse sequence to the dismantling procedure to re-assemble the unit.

4. INSTALLING THE DECK MECHANISM FOR BRIEF OPERATION (FIGURE 3)

- * Operations can be performed with the outside of the chassis in this condition. Also, turn the foil side of the main PCB upside down during maintenance.

In this manual, illustrations for SUMMARY, 2 SCART model is used. Instruct the same way for the other type models.

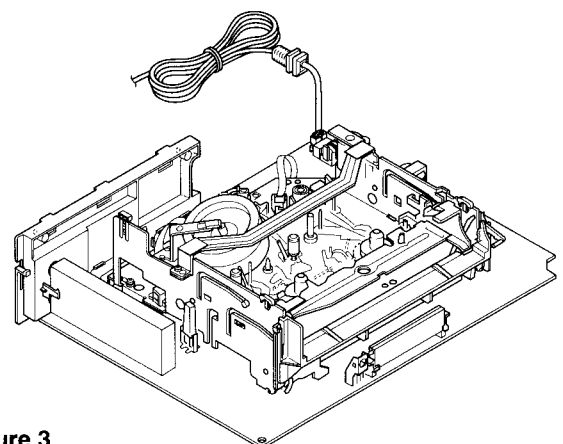
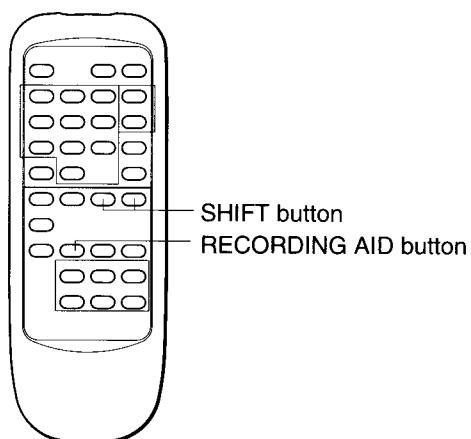


Figure 3

5. FINE TUNING OPERATION FOR SERVICE REPRESENTATIVE



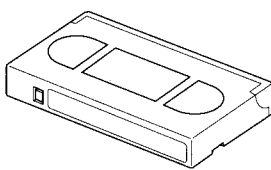
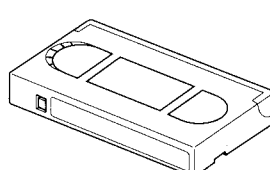
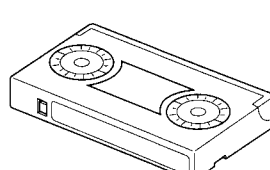
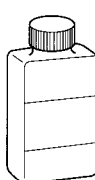
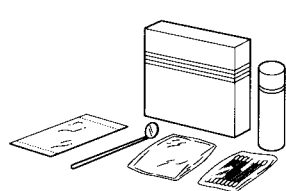
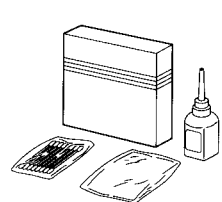
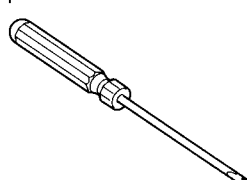
Fine Tuning for incomplected AFT (Auto Fine Tuning)

- Operate the Fine Tuning by pressing the   buttons with the RECORDING AID button pressed.
- When the  button is pressed, the frequency increases.
When the  button is pressed, the frequency decreases.
To continue to change the frequency, keep the  or  button pressed
- Fine-tuned data are stored in the memory.

6. WAVEFORM AND VOLTAGE MEASUREMENT

- Measurement of waveform and voltage at each section in the color circuits was conducted with sufficient service color bar signal being received and reproduced in normal conditions.
- Waveforms and voltage values for the remaining circuit were measured with a broadcasting signal normally received, so they may vary slightly according to the programs being received. Use them as a measure for servicing.
- All voltage values except the waveforms are expressed in DC and measured by a digital voltmeter.

2. SERVICING JIG LIST

(1) Alignment tape  ST-C6: 70909409 ST-C7: 70909410	(2) Back tension cassette gauge  70909103	(3) Torque cassette gauge (KT-300NR)  70909199
(4) Grease 	(5) VTR cleaning kit 	(6) VTR lubrication kit 
(7) Tapernat driver  70909228		

For details of the Deck Mechanism, refer to the "VCP SERIES" which was published in may '97 (File No. 116-9701).

3. ALIGNMENT TAPE SPECIFICATIONS

(1) ST-C6

Segment	System	Playback		Video Signal	Audio Signal	Applications
		Time (min)	Mode			
1	PAL & SECAM	10	SP	Mono Scope	1 kHz	Playback phase check, audio level check
2	PAL & SECAM	5	SP	3 MHz A ch	400 Hz and 7 kHz	ACE head position adjustment, ACE head azimuth adjustment, Linearity adjustment
3	PAL & SECAM	5	SP	3 MHz A ch	1 kHz (stereo)	ACE head position adjustment, ACE head height adjustment, Linearity adjustment
4	PAL	5	SP	Color bar	3 kHz	Video and Sound checks
5	SECAM	5	SP	Color bar	3 kHz	Video and Sound checks
6	MESECAM	5	SP	Color bar	3 kHz	Video and Sound checks
7	NTSC	5	SP	Color bar	1 kHz	Video and Sound checks

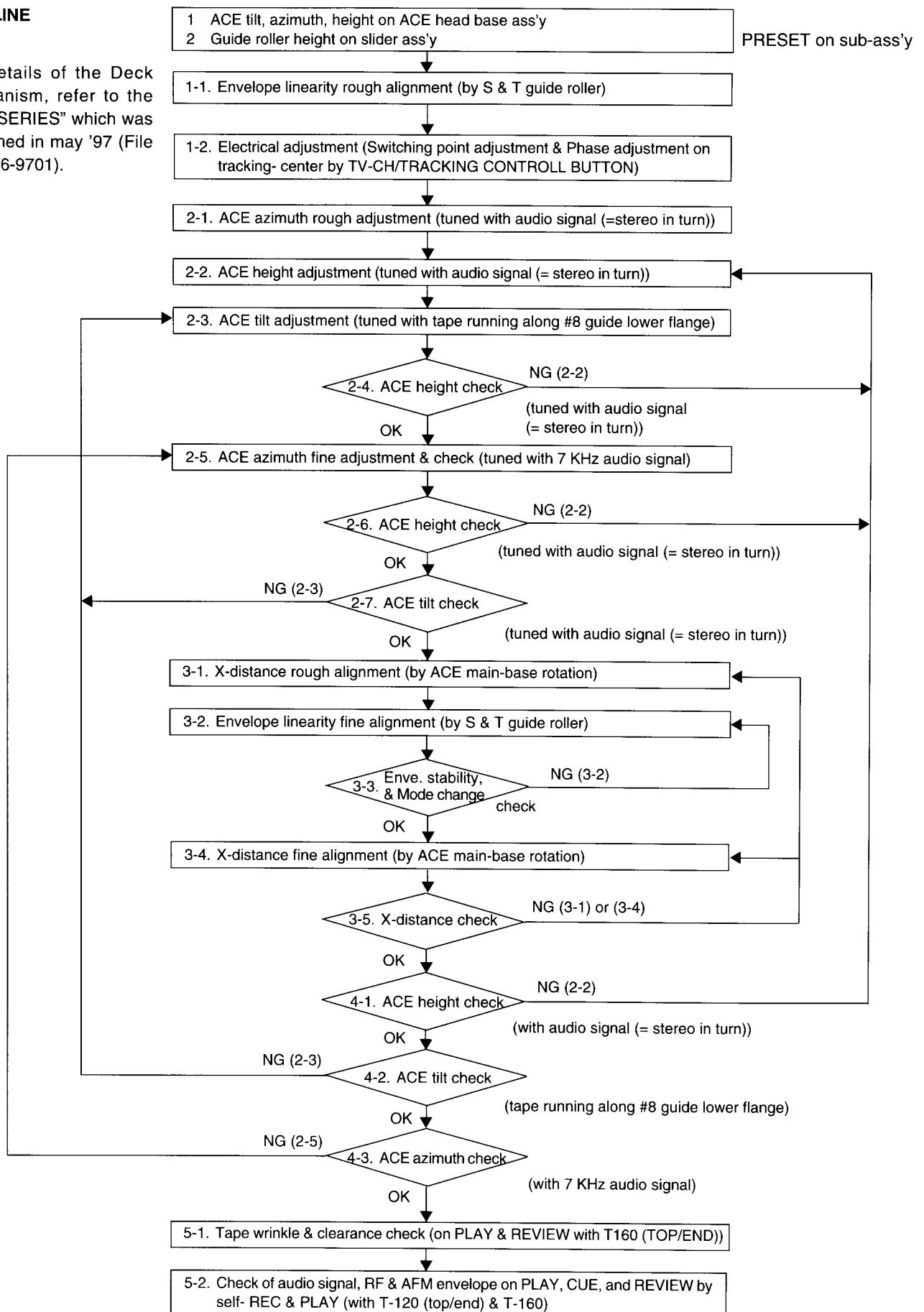
(2) ST-C7

Segment	System	Playback		Video Signal	Audio Signal	Applications
		Time (min)	Mode			
1	PAL	5	LP	3 MHz A ch	500 Hz (stereo)	ACE head position adjustment, ACE head height adjustment, Linearity adjustment
2	PAL	3	LP	Color bar	3.2 kHz	LP mode operation check, ACE head azimuth check and adjustment
3	PAL	3	SP	Color bar	AFM 400 Hz	SP mode operation check, AFM check
4	PAL & SECAM	5	SP	3 MHz A ch	AFM 400 Hz	AFM tracking checks
5	SECAM	5	LP	3 MHz A ch	No signal	Linearity adjustment
6	SECAM	3	LP	Color bar	No signal	LP mode operation check
7	SECAM	3	SP	Color bar	AFM 400 Hz	SP mode operation check, AFM check

4. TAPE TRANSPORTATION ALIGNMENT PROCESS

OUT-LINE

For details of the Deck Mechanism, refer to the "VCP SERIES" which was published in may '97 (File No. 116-9701).



EXPLANATION

1. PRESET

1-1. Envelope linearity rough alignment

Please playback and check RF-envelope in SP test tape, and make envelope form flat by S & T-guide roller height aligned with slit-driver (on shifted-tracking position by TV-CH/TRACKING CONTROLL BUTTON. And adjust to best judge point for envelope).

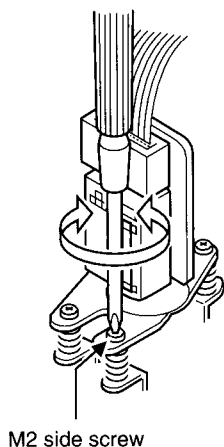
1-2. Electrical adjustment

According to electrical adjustment spec., please adjust switching point. (See page 10)

2. ACE HEAD ROUGH ADJUSTMENT

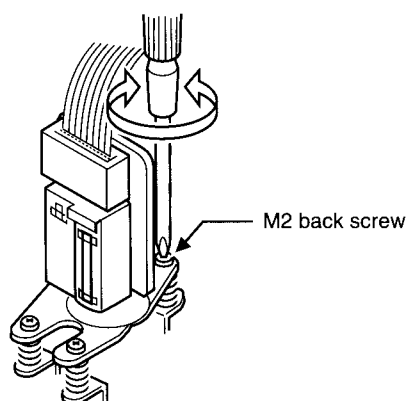
2-1. ACE azimuth rough adjustment (by ACE-side-screw alignment)

Please playback and check audio-signal in test tape, and align ACE-side-screw height roughly make signal maximum.



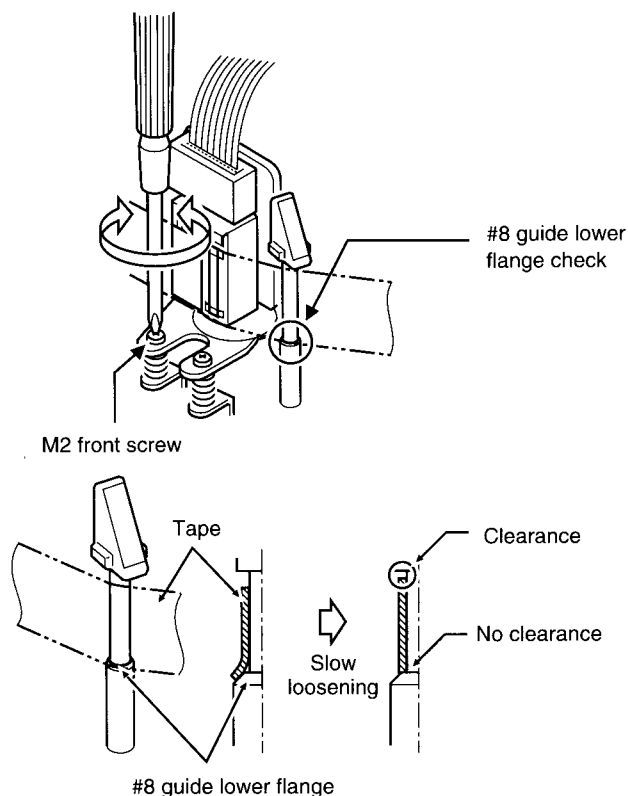
2-2. ACE height adjustment (by ACE-back-screw alignment)

Please playback and check audio-signal in test tape, and align ACE-back-screw height to make signal maximum flat in order to suit ACE-height to tape running height.



2-3. ACE tilt adjustment (by ACE-front-screw alignment)

Please align ACE-front-screw height on CUE or PLAY (CUE is better) to make tape run along #8 guide lower flange. (This process is easier. 1st step : to make tape run below lower flange. 2nd step : to make tape running height higher and higher slowly until wrinkle disappears.)



2-4. ACE height check

By the same process as (2-2) re-check the ACE height. (If NG, refer to (2-2) height adjustment)

2-5. ACE azimuth fine adjustment & check

By ACE-side-screw, please playback and check 7 KHz audio signal (monaural) in test tape, and align ACE-side-screw height to get maximum level of 7 KHz signal.

2-6. ACE height check

By the same process as (2-2) re-check the ACE height. (If NG, refer to (2-2) height adjustment)

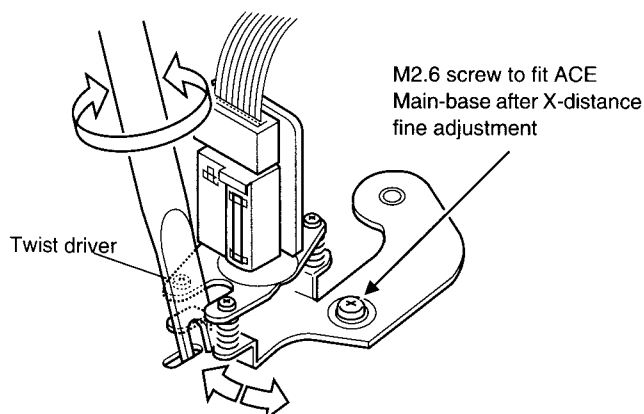
2-7. ACE tilt check

By the same process as (2-3), please check tape running height to #8 guide lower flange as (2-3) process. (If NG, refer to (2-3) Tilt adjustment)

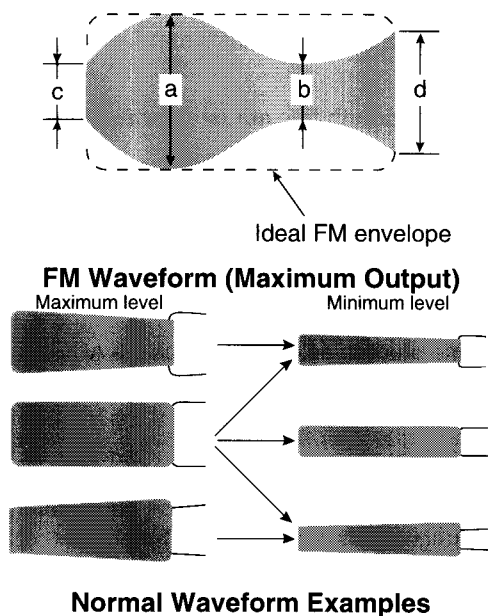
3. LINEARITY & X-DISTANCE ADJUSTMENT

3-1. X-distance rough adjustment

1. Connect the CH-1 oscilloscope to TP of V-ENV and CH-2 to TP of CTL. At this time, trigger the oscilloscope externally with the signal (Video Switching Pulse) from TP of V-SWP.
2. Play the test tape.
3. Use the Channel ▲/▼ buttons to tune the tracking to center position. Adjust point ACE main-base rotation twisted with slit-driver (or mimus-driver) so that the FM envelope output at TP of V-ENV reaches a maximum.



4. Using the Channel ▲/▼ buttons. Perform the following 3 steps (5-7) by moving the TP of CTL waveform in both positive (+) and negative (-) directions in 3 ms increments.
5. Refer to the figure below. Read the level of portion (a) of the waveform. If the waveform is serrated at point (a), adjust the level so that the serrations are as smooth as possible (refer to the figure).



6. As shown in the equation below, read the FM waveform value at point (b) and make sure that:

$$\frac{b}{a} \geq 0.75 \text{ or } 20 \log \frac{b}{a} \geq -2.5 \text{ dB}$$

7. Read the values at points (c) and (d) [drum input and output] and make sure that:

$$\frac{c}{a} \geq 0.63 \text{ and } \frac{d}{a} \geq 0.63 \text{ or}$$

$$20 \log \frac{c}{a} = -4 \text{ dB and}$$

$$20 \log \frac{d}{a} = -4 \text{ dB}$$

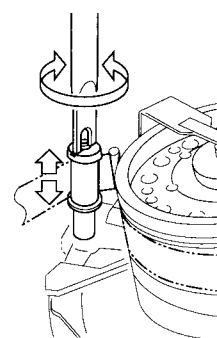
NOTE:

Read the minimum levels for (b), (c), and (d).

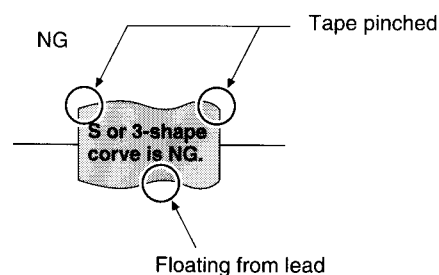
3-2. Envelope linearity fine alignment

Please playback and check RF-envelope in EP (NTSC) (or LP (CCIR) or SP (SP only set)) test tape, and make envelope form flat by S & T-guide roller (on shifted-tracking position).

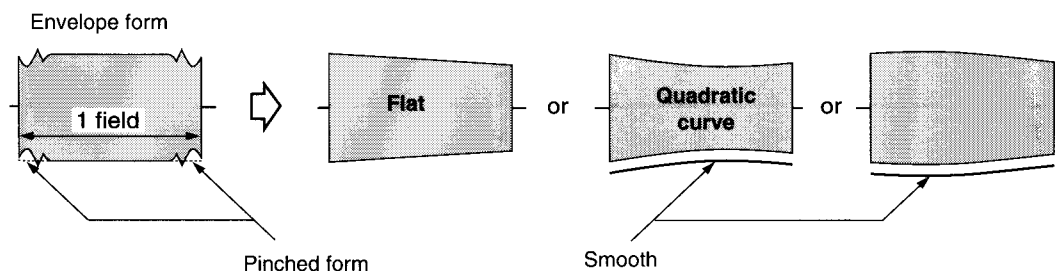
1. please tighten S & T-guide roller to make RF-envelope around switching point pinched.
2. Please loosen S & T-guide roller slowly.
3. Please stop loosening at the point, where envelope linearity is flat or loose quadratic curve and envelope is increased and decreased parallelly by tracking-shift. If over-loosening, please return (3-2-1).



(Note)



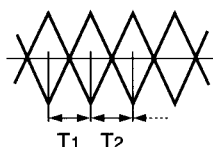
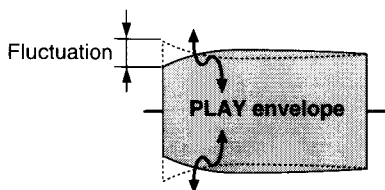
4. Please judge RF-envelope form according to spec. table. If NG, please return (3-2-1). Please do not make linearity in specification unnaturally, please make tape run along drum-lead priority. If NG, please check lead or heads of drum.



3-3. Envelope stability and mode change check

Please judge below mentioned items according to spec. table. If NG, please return (3-2)

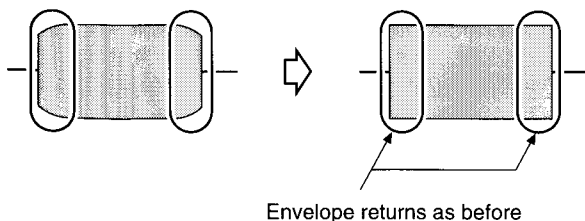
1. Envelope stability on PLAY, REVIEW, & CUE mode
Envelope fluctuation should be in specification.



On REVIEW & CUE
envelope
 $T_1 \cong T_1 \cong \dots \cong T_n$
constantly

2. Time until envelope returns as before after mode-change (REVIEW → PLAY, STOP → PLAY, loading → PLAY)

Time until envelope returns as before should be in specification.



3-4. X-distance fine adjustment

Please playback and check RF-envelope in EP (NTSC) {or LP (CCIR) or SP (SP only set)} test tape, and make envelope maximum closer to position after (3-1) by ACE main-base rotation (on tracking-center position). After adjustment, please tighten 1 piece of M2.6 screw to fit ACE main-base.

3-5. X-distance check on play-mode on all speeds

Please re-check X-distance as process (3-1) & (3-4). Priority arrangement of X-distance precision is "EP > LP > SP". (If NG (3-1) or (3-4))

And lag time of SP envelope maximum tracking to EP's (LP's on CCIR set) one should be 3 ms or less. If NG, please check height difference between head by head on drum.

4 ACE HEAD RE-CHECK

4-1. ACE height re-check (checked by the same process as (2-6))

Please re-check and judge audio height as the same process as (2-6) according to spec. table. (If NG (2-2) height adjustment)

4-2. ACE tilt re-check (by the same process as (2-7))

Please re-check if tape run along #8 guide lower flange as (2-7) (If NG (2-3) Tilt adjustment)

4-3. ACE azimuth re-check (by the same process as (2-5))

Please playback 7 KHz audio signal, and judge audio azimuth according to spec. table.

(If NG (2-5) azimuth fine adjustment)

If OK, please put down lock tile 601 on tilt & azimuth screw.

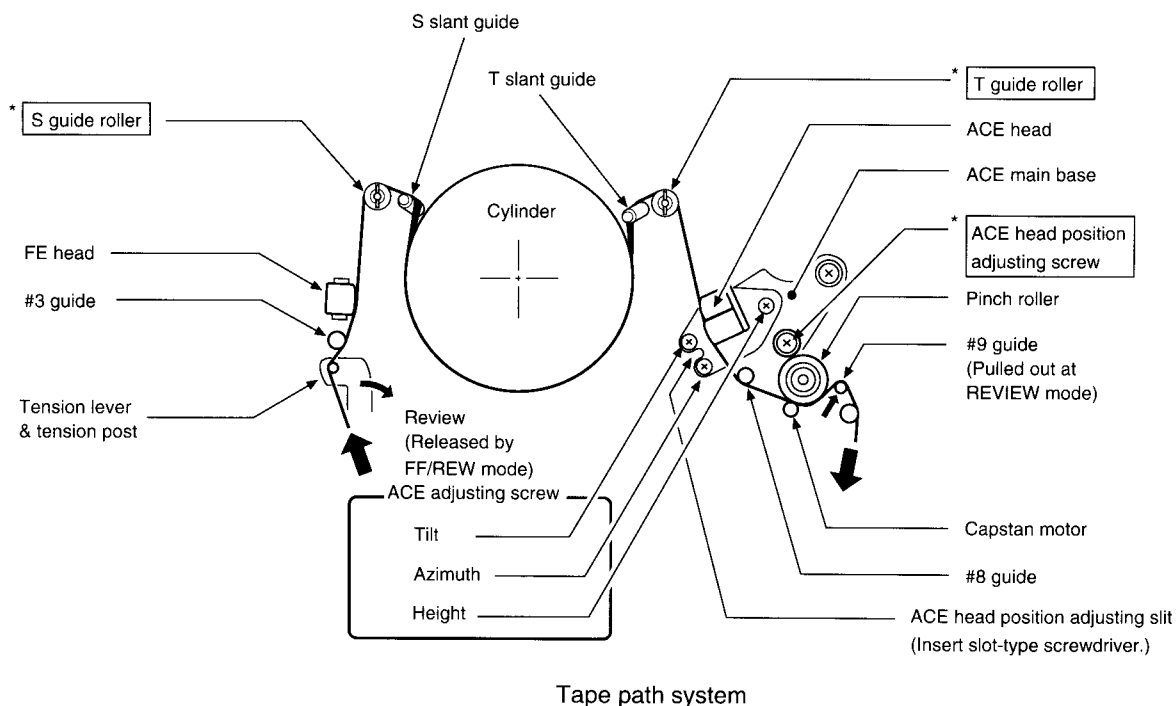
5 TAPE WRINKLE CHECK ETC.

5-1. Tape wrinkle & clearance (on play & review by T160 (TOP/END))

Please check tape wrinkle by T-160 and tape running height along datum guide flange. (check modes : PLAY, CUE, REVIEW check tape position : top & end)

If transport has big wrinkle to damage, please check tension and guide inclination & height. If tape does not run along datum guide flange, please align again or check guide precision.

CHECK POINTS	Forward	Reverse	Necessary condition
#3 guide lower flange	important check	without	no damage
S guide roller upper	check	important check	no clearance & no damage
T guide roller upper	important check	check	no clearance & no damage
#8 guide lower flange	important check	check	no damage
#8 guide upper flange	important check	check	clearance on play/no damage
#8 ~ Capstan tape twist	important check	important check	no twist or small twist
#9 guide upper & lower	without	important check	no damage



5-2. Check of audio signal, RF & AFM envelope

Please check audio signal, RF & AFM envelope on PLAY, CUE, and REVIEW according to specification table by self-REC & PLAY with T-120 (top/end) & T-160 (top/end).

5. PERIODIC MAINTENANCE

The following procedures are recommended for maintaining optimum performance and reliability of this video cassette recorder.

CLEANING

For cleaning, use a lint-free cloth or gauze dampened with alcohol.

TAPE TRANSPORT SYSTEM

1. The tape transport system components should be cleaned after every 500 hours of use.
2. Since the above parts come in direct contact with video tape, they tend to collect dust particles. If allowed to accumulate, dust may lead to damage to the video tape and above parts.
3. After cleaning with alcohol, allow the parts to dry thoroughly before using a cassette tape.

NOTE:

- When cleaning the video heads on the upper drum, do not clean them with a vertical stroke.
- Use only a gentle back and forth motion in the direction of the tape path.

REEL DRIVE SYSTEM

1. The reel drive system components should be cleaned after every 1000 hours of use.
2. The above revolving parts are of rubber or come in direct contact with rubber parts. Dust on rubber accumulates and interferes with proper operation.
3. Avoid using excessive alcohol when cleaning rubber parts.

SERVICE SCHEDULE FOR MAIN COMPONENTS

The following table lists the parts which should receive periodic servicing at the recommended intervals.

Ref. No	TOSHIBA Part No.	Description	Periodic Service Schedule (operating hours)				
			1000	2000	3000	4000	5000
G001	70311921	Cylinder Ass'y for 2 Head 1 Speed Deck No.70300394	○	●	○	●	○
G001	70311939	Cylinder Ass'y for 2 Head 2 Speed Deck No.70300397	○	●	○	●	○
G001	70311920	Cylinder Ass'y for PAL 4 Head 2 Speed Deck No. 70300395	○	●	○	●	○
G001	70311941	Cylinder Ass'y for SECAM 4 Head 2 Speed Deck No.70300398	○	●	○	●	○
G542	70342117	Belt, Pulley		●		●	
G555	70326756	Pinch, Ass'y		●		●	
K200	70316106	Gear, Clutch, Ass'y		●		●	
K250	70326753	Band, Brake Ass'y		●		●	
K330	70326749	Lever, S. Brake Ass'y		●		●	
K340	70326760	Lever, T. Brake Ass'y		●		●	
G480	70318793	Head, ACE. Ass'y			●		
B410	70322542	Motor Loading Ass'y			○		
B560	70125755	Motor Capstan Ass'y			○		
K110	70331600	Disk, S Reel			○		
K140	70331601	Disk, T Reel			○		

Standard Service Periods

- Check and replace if necessary
● Replace

NOTE:

Cleaning and replacement of the belts should be undertaken every 2 years even if the unit is not used frequently.

6. TEST POINTS

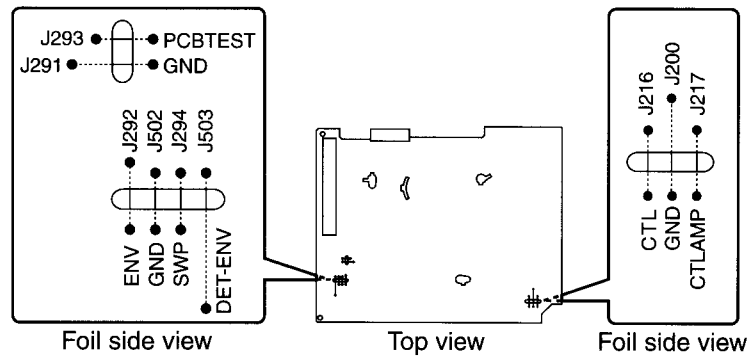


Figure 1

7. PLAYBACK SWITCHING POINT ADJUSTMENT

- Mode** :PLAY
- Test Signal** :ST-C6 or C7 (must be use the test tape cassette without the safety tab, and SP mode recorded.)
- Check Point** :FIP
- Adjustment Point** :The adjustment is performed automatically by μ -com.
- Adjustment** :
- (1) Playback the test tape and allow the automatic ATR to finish. It will take about 4 or 5 seconds. The ATR is finished when "DT" (Digital Tracking) on the FIP stops blinking. (Figure 2 an arrow).
 - (2) Short the connection more than 2 seconds between PCB TEST (J293) and GND (J291) on the MAIN circuit board (Figure 1 above). Then the segments start count down (Figure 2). During count down, μ -com performs the adjustment of the switching point.
 - (3) In about 10 seconds, the FIP indicates the "STILL" $\rightarrow$ "PLAY". It means that the normal Adjustment process of the switching point is completed. But if the FIP indicates the "PLAY" $\rightarrow$ "STOP", it means abnormal adjustment process. So try again (2) process.
 - (4) Clear the TEST POINT short.

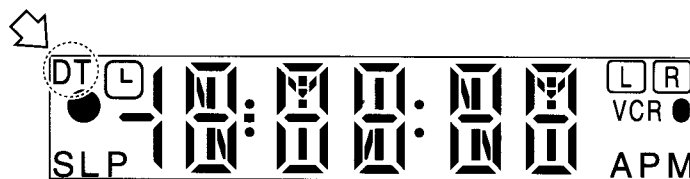


Figure 2

8. PROCEDURE FOR INITIALIZING THE EEPROM

1. Depend on needs, replace the EEPROM (IC702).
2. Install the DECK on the MAIN circuit board.
3. Connect the AC power supply to the set, and then turn OFF the POWER to the set.
4. Short the PCB TEST (J293) of the test jumper on the MAIN board with the GND J291 (Figure 1) more than 2 seconds.
5. When the FIP lights off, Initialization of the EEPROM starts.
6. After initialization ends, the FIP returns to the normal POWER OFF mode. (Figure 3)
7. Clear the TEST POINT short.
8. Initialization is now finished.

Of course, user needs setting the CLOCK etc, after the procedure. Because μ -com is re-set.

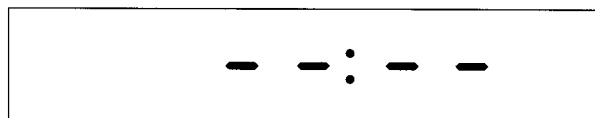
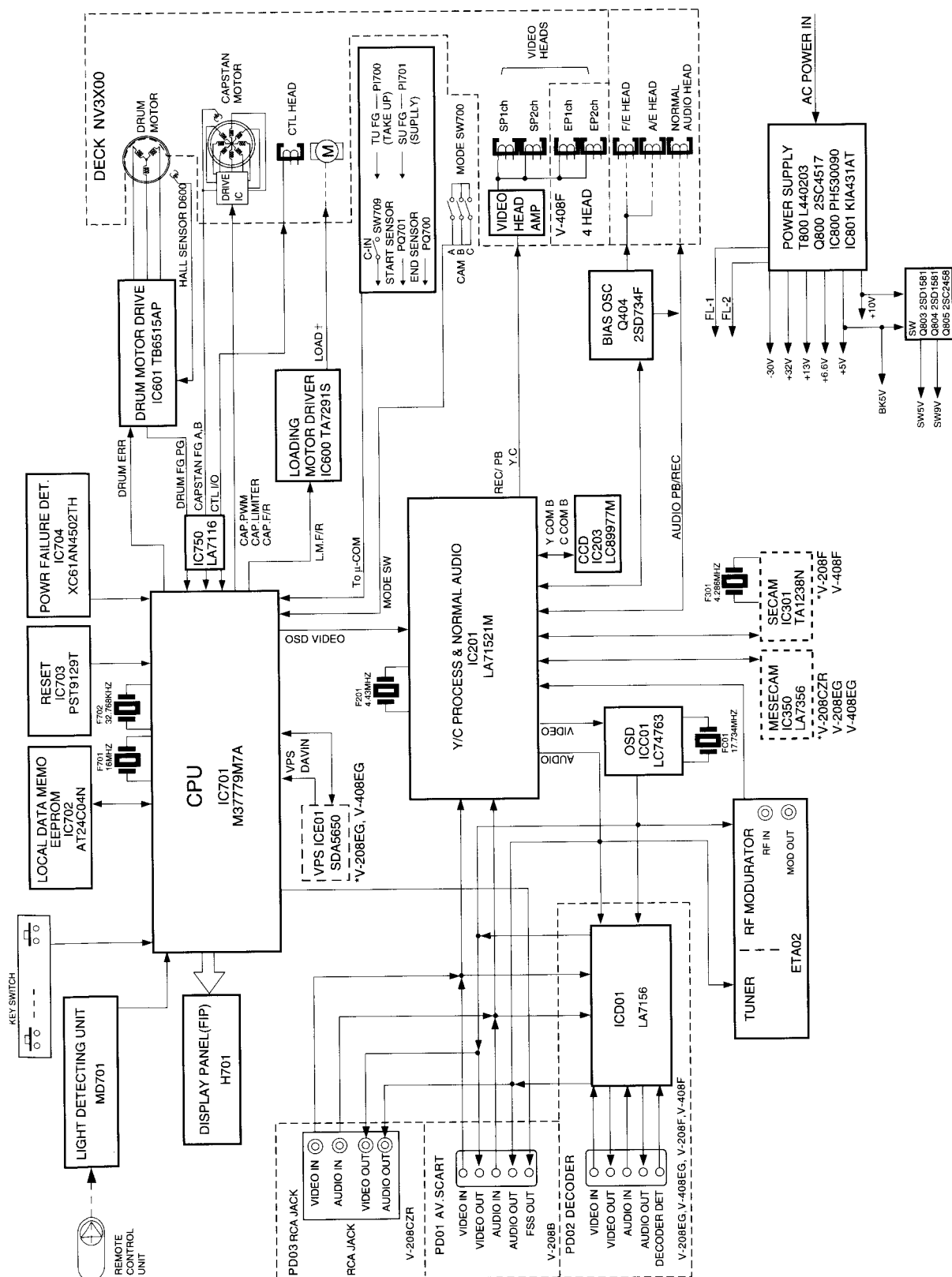


Figure 3

SECTION 3 SERVICING DIAGRAMS

1. BLOCK DIAGRAM



For details, refer to their parts lists and schematic diagrams.

2. TERMINOLOGY REFERENCE

Parts Name	CAD-Code	Numerical Value
Chip Capacitor	CAR75C CA3R0C CA100U CA333B CA104F	R75=0.75pF 3R0=3.0pF 100=10 × 10 ⁰ =10pF 333=33 × 10 ³ =33000pF=0.033μF 104=10 × 10 ⁴ =0.1 × 10 ⁶ pF=0.1μF
Chip Tantalum	CAT0.1/35E	0.1/35=0.1μF / 35V
Electrolytic Capacitor	ES47/16	47/16=47μF / 16V
Chip Resistor	RBR68 RA1R0 RA180 RA821 RA102	R68=0.68 Ω 1R0=1.0Ω 180=18 × 10 ⁰ =18 Ω 821=82 × 10 ¹ =820 Ω 102=10 × 10 ² =1000 Ω=1KΩ
Coil	LAUR22T LAY2R2T LAY330T LAY151T	R22=0.22 μH 2R2=2.2 μH 330=33 × 10 ⁰ =33 μH 151=15 × 10 ¹ =150 μH

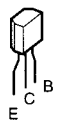
The following terms have been changed as a result of the use of a new CAD system.

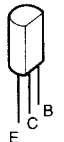
Parts Name	Circuit Ref. No.	CAD Code	Description
IC	IC101	LA3373 MT	Taping or Forming Type Description (LA3373) Circuit Ref. Number Head Name
Hybrid IC	IC102	HIC	Code No. (3-8 Column → 11. 0)
Transistor	Q101	2SC2785 T E F	hfe Rank Taping Type Description (2SC2785) Circuit Ref. Number Head Name
Diode	D101	MTZJ3.0 A RT	Taping or Forming Type  Rank Description (MTZJ3.0) Circuit Ref. Number Head Name
Chip Capacitor	C101	CA 102 S J 100	Voltage Proof Tolerance Temperature Characteristic Capacitance (10 × 10 ² =0.1 × 10 ⁴ pF=0.001μF) Chip Capacitor Type Circuit Ref. Number Head Name
Chip Tantalum	C102	CAT 0.1 /35 E	Maker Mark Voltage Proof (35V) Capacitance (0.1μF) Chip Tantalum Capacitor Type
Chip Trimmer	C103	CT.	Code No. (3-8 Column → 15. 0)
Trimmer Capacitor	C104	CT.	Code No. (3-8 Column → 15. 0)
Ceramic Capacitor	C105	CH 120 H	Taping or Forming Type Capacitance (12 × 10 ² =12pF) Temperature Characteristic
Electrolytic Capacitor	C106	ES 47/ 16 H	Taping or Forming Type Voltage Proof (16V) Capacitance (47μF) Electrolytic Capacitor Type
Chip Resistor	R101	RA 202 G	Resistance Tolerance Resistance (20 × 10 ² =2KΩ) Chip Resistor Type Circuit Ref. Number Head Name
Resistor	R102	RC 1R0 R	Taping or Forming Type Resistance (1.0 Ω) R : Decimal Point Mark Resistor Type

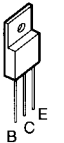
Part Name	Circuit Ref. No.	CAD Code	Description
Coil	L101	LAY 151 T	Taping or Forming Type Inductance ($15 \times 10^1 = 150\mu\text{H}$) Coil Type L : Fixed Letter A : Maker Mark Y : Part Forming (or Size) Circuit Ref. Number Head Name
Transformer	L101	L.	Code No. (3-8 Column → 17. 0)
Antenna	ANT101	ANT.	Code No. (3-8 Column → 10. 0)
Battery	BT101	BT.	"
Buzzer	BUZ101	BUZ.	"
Electric Tuner	ET101	ET.	"
Relay	K 101	K.	"
Memblem SW ASSY	MB101	MB.	"
Microphon	MC101	MC.	"
Module	MD101	MD.	"
Motor Stator Assy	MS101	MS.	"
Manual Tuner	MT101	MT.	"
Push Button Tuner	PT101	PT.	"
Switch Power Unit	PW101	PW.	"
CR Component	CR101	CR.	Code No. (3-8 Column → 11. 0)
IN-line Block	IB101	IB.	"
Surge Absorber	Z101	Z.	Code No. (3-8 Column → 13. 0)
Ceramic Varistor	Z102	Z.	"
Silicom Varistor	Z103	Z.	"
FIP	H101	FIP.	Code No. (3-8 Column → 14. 0)
LCD	H102	LCD.	"
LED	LD101	LED.	"
Neon Bulb	NE101	NE.	"
Photo Diode	PD101	PD.	"
Photo Coupler	PH101	PH.	"
Photo Interrapter	PI101	PI.	"
Pilot Lamp	PL101	PL.	"
Photo Transistor	PQ101	PQ.	"
CCD	Y101	Y.	"
Ceramic Filter	F101	F.	Code No. (3-8 Column → 17. 0)
Crystal	F102	F.	"
Printed Circuit Board	W101	Code No.	Code No. 18.
Block PC Assy	BL101	"	"
Wire	N101	Code No.	Code No. 191.
QS-CONN	N102	"	"
Shield Wire	N103	"	Code No. 192.
Flat Wire	N104	"	"
Coaxial	N105	"	"
Strip Wire	N106	"	Code No. 193.
Flat Wire	N107	"	Code No. 194.
Flexible Wire	N108	"	"
Strip Wire	N109	"	Code No. 195.
QS-CONN	N110	"	Code No. 1960.
"	N111	"	Code No. 1961.
"	N112	"	Code No. 1962.
"	N113	"	Code No. 1963.
Antenna Jack	AJ101	"	Code No. 1965.
QS-CONN	N101	"	Code No. 196A.
POST	P101	"	Code No. 1981.
Jumper	J101	"	Code No. 1983.
RT Pin	TP101	"	Code No. 1984.
Check Pin	TP102	"	"
IC Socket	P102	"	Code No. 1985.
Switch	SW101	Code No.	23.
Volume	RV101	"	"
Fuse	Z101	"	"
Fuse Holder	FH101	"	"

3. IC, TRANSISTOR LEAD IDENTIFICATION

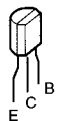
TOP VIEW 	2SA1037KT 2SC2412KT RN2403T RN1403T
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	2SC2458T KRC102MT
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	2SA1020T
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	2SC4517
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	2SD1581
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	2SD734 2SD2132T
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	KIA431AT
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	PST9129T XC61AN4502TH
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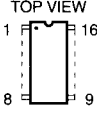
FRONT VIEW 	TA7291S
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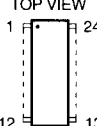
TOP VIEW 	DIP PHOTOCOUPLER
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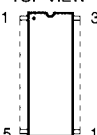
TOP VIEW 	SOP AT24C04N-10SC
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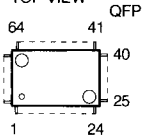
TOP VIEW 	DIP LA7356
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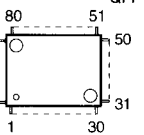
TOP VIEW 	DIP SDA5650 SOP LC89977M
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TOP VIEW 	DIP TB6515AP
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TOP VIEW 	DIP LA7116 DIP LA7156 DIP TA1238N
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TOP VIEW 	DIP LC74763
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TOP VIEW QFP 	LA71521M
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TOP VIEW QFP 	M37779M7A
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4. UNLOADING METHOD OF CASSETTE IN MANUAL

The mechanical deck can not be removed at the condition the cassette is loaded, since one of screws for mounting the mechanism deck with the chassis is located under the cassette.

If the cassette can not be unloaded even pressing the "EJECT" button, eject it using the following method.

- Remove the worm gear holder and the worm gear, and turn the worm wheel to unloading direction shown in Fig. 1 with a screw driver etc.
- When S, T sliders start unloading, insert a small screw driver into the rectangle hole of the bottom plate side shown in Fig. 2 and turn the worm wheel while winding the tape by turning the pulley of the clutch gear assembly to the arrow direction in bottom view so that the grease does not stick to the tape by loosening.

NOTE

Perform this method putting the unit with the normal sitting condition for protecting the tape.

5. CHECK METHOD OF EACH OPERATION MODE WITHOUT LOADING THE CASSETTE

- (1) Put some tapes on both left and right side of the cassette holder so that the start/end sensors are not affected by the light. (Fig. 3)
- (2) Remove the top bracket. (Fig. 4)

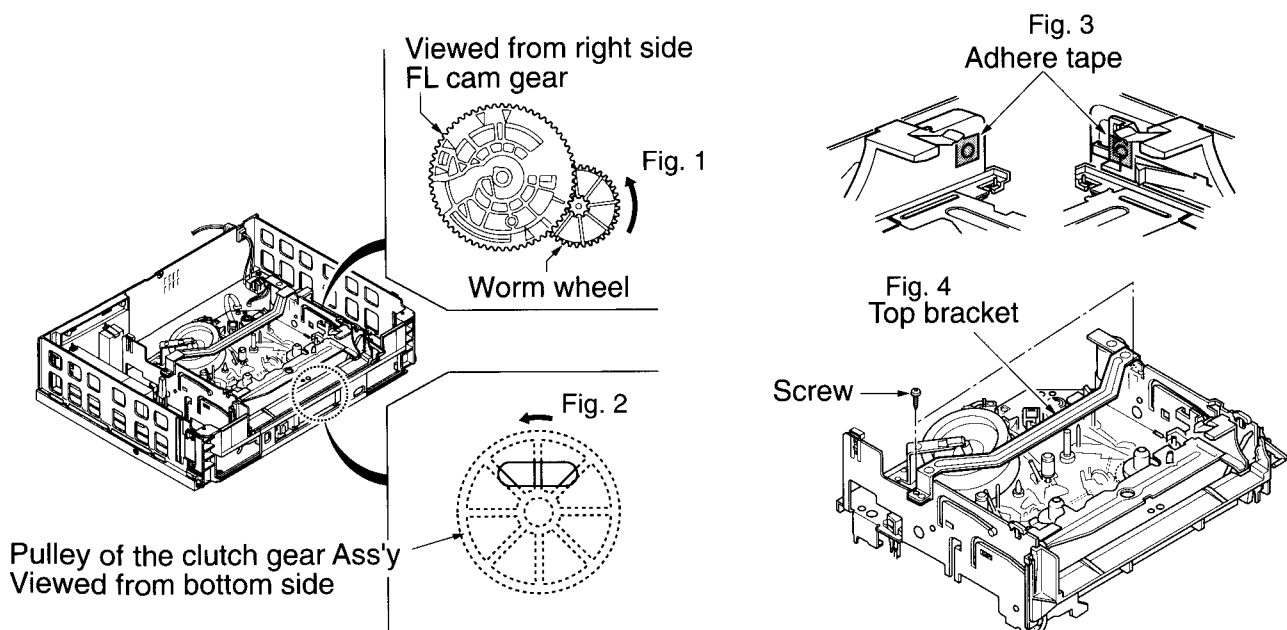
NOTE

When releasing the lock lever and slotting in, be sure to remove the top bracket since your finger may be put between the top bracket and the pressure spring of cassette holder.

- (3) Release both lock levers of the cassette holder and slot it in.
- (4) Turn the reel table of rotating side and opposite side reel table in manual.
- (5) In this condition, the operating in each mode can be performed.

NOTE

In PLAY or FF/REW mode, the auto eject will be actuated or the power will be turned off if the reel pulse, which is generated by turning the rotating side and opposite side reel tables, is not sent manually.



Memo

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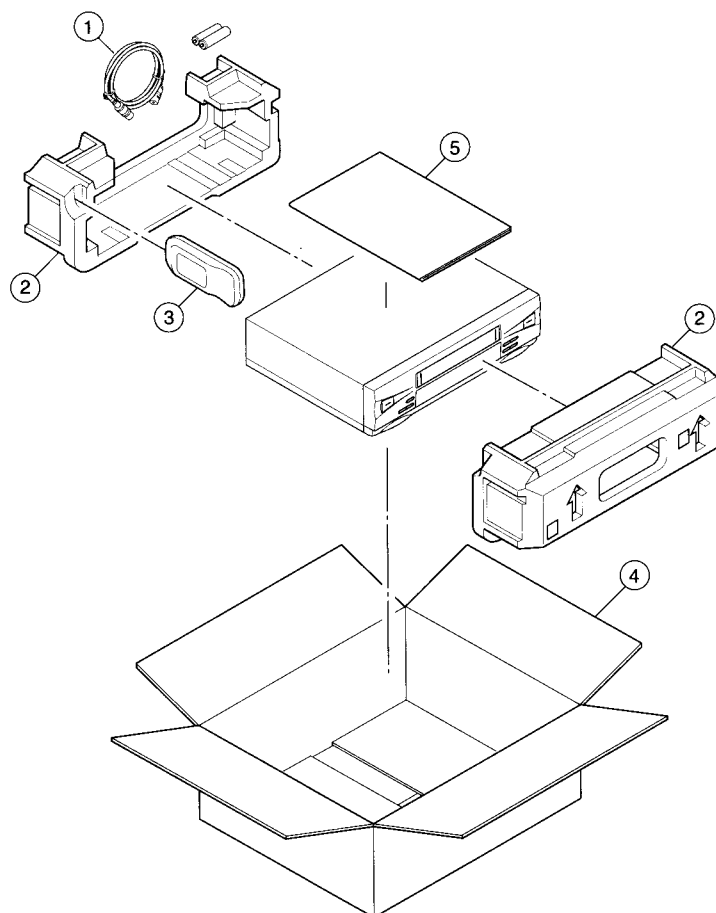
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SECTION 4 DIAGRAMS AND PARTS LIST

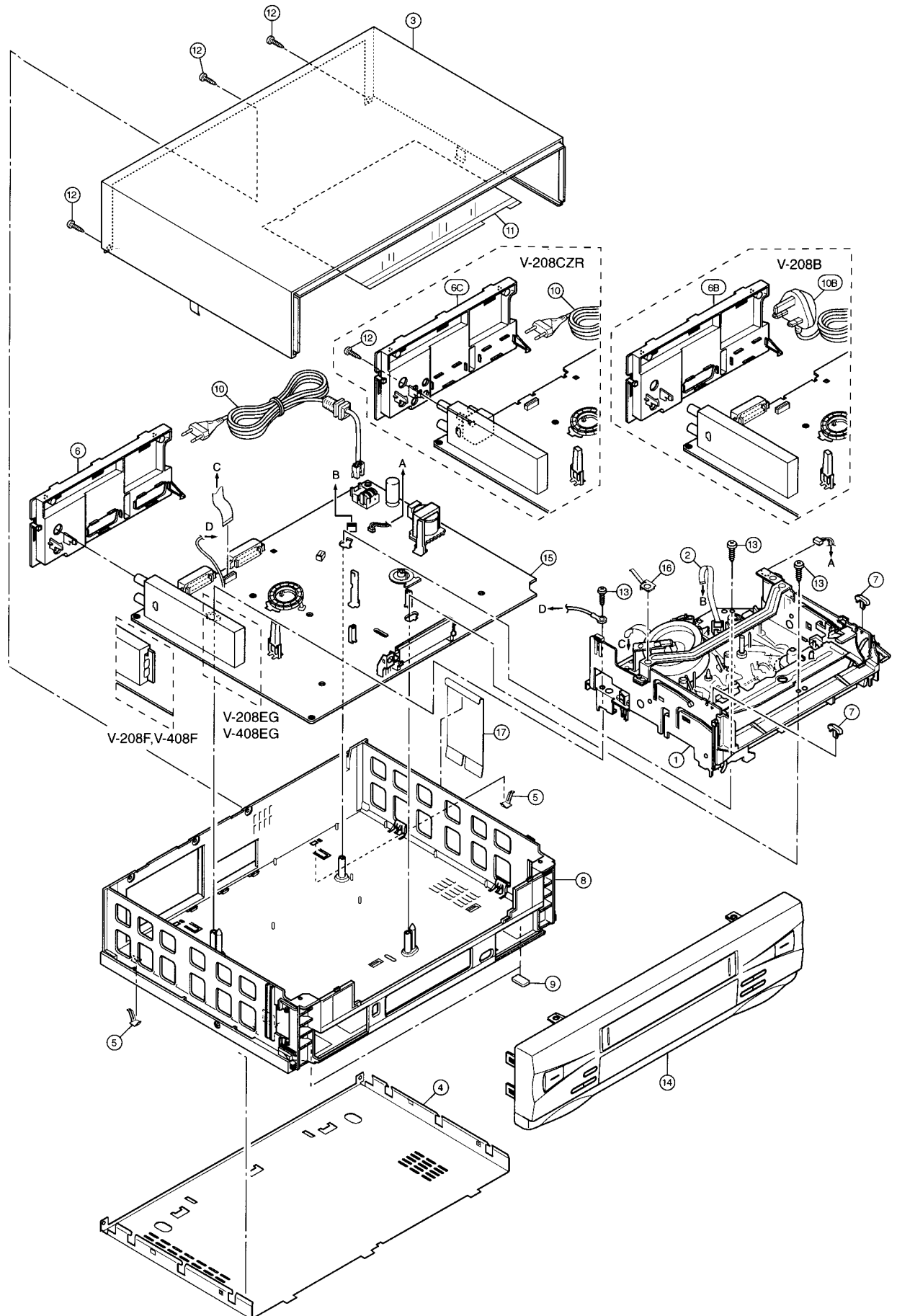


1. ACCESSORIES

Model Name	V-208EG		V-408EG		V-208F V-408F		V-208CZR	
Description								
1. CABLE	26B1034 BZ684311				26B10700 BZ684393		26B1034 BZ684311	
2. STYROFORM			28713671 BZ684423					
3. REMOTE CONTROLLER	108074200 BZ684458				V-208F	V-408F	108074401 BZ684467	
					108074300 BZ684479	108074500 BZ684462		
4. IN BOX	28529841 BZ684459		28530020 BZ684482		28529851 BZ684463	28529861 BZ684464	28529950 BZ684468	
5. OWNER'S MANUAL	German / English	French	German / English	French	French / English / German		English / Russian	Polish / Czech
	288E8370 BZ684460	288E8380 BZ684461	288E8540 BZ684483	288E8550 BZ684484	288E8390 / 288E8400 BZ684465 / BZ684466		288E8410 BZ684469	288E8420 BZ684470

* The upper numbers in each box indicate the reference No.
The lower numbers in each box indicate the TOSHIBA No.

2. CABINET & CHASSIS ASSEMBLY



3. PARTS LIST FOR FINAL ASSEMBLY

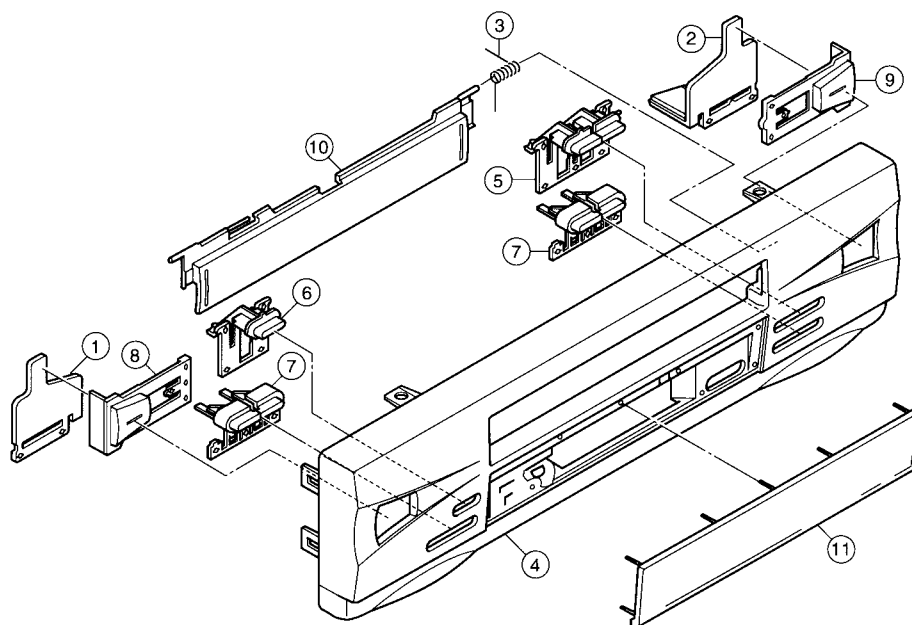
CABINET & CHASSIS

NOTE: ⚠ : Safety Materials

LOCATION NO.	REFERENCE NO.	TOSHIBA PART NO.	DESCRIPTION	Q'TY
1*	59502	70300394	DECK MECHANISM NV3200 (2HEAD / 1SPEED)	1
1*	59508	70300397	DECK MECHANISM NV3210(2HEAD/2SPEED)	1
1*	59503	70300395	DECK MECHANISM NV3400 (PAL 4 HEAD/2SPEED)	1
1*	59509	70300398	DECK MECHANISM NV4400 (SECAM 4HEAD / 2SPEED)	1
2	194001130	BZ684430	FLEXIBLE WIRE ##	1
3	21046440	BZ780919	COVER (TOP)	1
4	21046450	BZ780920	COVER (BOTTOM)	1
5	21291270	BZ780921	PLATE SPRING	2
6	22129400	BZ780992	REAR PANEL V-208F/V-408F	1
6	22129420	BZ780989	REAR PANEL V-408EG/V-208EG	1
6 ^c	22129410	BZ780994	REAR PANEL V-208CZR	1
7	22129370	BZ780923	HOLDER (T2DECK)	2
8	22704500	BZ780971	CHASSIS ##	1
9	25351080	BZ780926	CUSHION	2
⚠ 10	26021710	BZ684448	POWER CORD (PAL-CL)	1
11 V-208CZR only	28061380	BZ684431	INSULATOR	1
12	2953312C	BZ780584	DPBB-3X12SSC	3~4 (CZR)
13	2971412A	BZ780927	DPBP-4X12SSA	3
14	22329550	BZ780990	FACE PLATE ASS'Y V-208EG	1
	22330220	BZ781027	FACE PLATE ASS'Y V-408EG	1
	22329681	BZ780993	FACE PLATE ASS'Y V-408F	1
	22329691	BZ780999	FACE PLATE ASS'Y V-208F	1
	22329700	BZ780995	FACE PLATE ASS'Y V-208CZR	1
15	35S71A0	BZ680093	MAIN CIRCUIT BOARD V-208EG	1
	35T02A0	BZ680102	MAIN CIRCUIT BOARD V-408EG	1
	35S72A0	BZ680095	MAIN CIRCUIT BOARD V-208F	1
	35S73A0	BZ680096	MAIN CIRCUIT BOARD V-408F	1
	35S74A0	BZ680097	MAIN CIRCUIT BOARD V-208CZR	1
16 EXCEPT V-208CZR	21291280	BZ780968	PLATE SPRING (T2 DECK)	1
17 V-208F / V-408F	21235200	BZ780991	S.PLATE (CE)	2

* 2 Head 1 Speed Model : V-208F
 2 Head 2 Speed Model : V-208B, V-208CZR, V-208EG
 PAL 4 Head 2 Speed Model : V-408EG
 SECAM 4 Head 2 Speed Model : V-408F

4. FACE PLATE ASSEMBLY



5. INDIVIDUAL PARTS LIST FOR FACE PLATE ASS'Y & MAIN CIRCUIT BOARD

FACE PLATE ASS'Y

LOCATION NO.	REFERENCE NO.	TOSHIBA PART NO.	DESCRIPTION	Q'TY
1	22129330	BZ780936	HOLDER (LEVER-L)	1
2	22129340	BZ780937	HOLDER (LEVER-R)	1
3	25721130	BZ780946	DUST COVER SP	1
5	22781940	BZ780941	P.BUTTON(PLAY-STOP)	1
6	22781950	BZ780942	P.BUTTON(REC)	1
7	22781960	BZ780943	P.BUTTON(CH-FR)	2
8	22781970	BZ780944	P.BUTTON(POWER)	1
9	22781980	BZ780945	P.BUTTON(EJECT)	1

Model Name Description	V-208EG	V-408EG	V-208F	V-408F	V-208CZR
4. FACE PLATE	22238000 BZ780996		22238301 BZ781000		22238310 BZ781005
10. DUST COVER	22405550 BZ780997	22407220 BZ781025	22407060 BZ781001	22407050 BZ781003	22407070 BZ781006
11. COVER GLASS	22464760 BZ780998	22465010 BZ781026	22464860 BZ781002	22464850 BZ781004	22464770 BZ780974

MAIN CIRCUIT BOARD (V-208EG/V-408EG)

LOCATION NO.	REFERENCE NO.	TOSHIBA PART NO.	DESCRIPTION	Q'TY
C201, C206	157A1020E	BZ180021	CI,0.001MFD,2125,B,50V,K	13
C202, C212	157A1030E	BZ180022	CI,0.01MFD,2125,B,25V,K	29
C203, C209	157C2230E	BZ180117	CI-2125F223Z25-CT	6
C207, C234	155610525	BZ180016	CE,1MFD,SSM,50V,M	12
C208, C246	157C4730E	BZ180103	CAPACITOR,CHIP,0.047UF 25V	3
C210, C215	157C2230E	BZ180117	CI-2125F223Z25-CT	-
C211, C236	15713300E	BZ180036	CI,33PF,2125,CH,50V,J	2
C213, C232	155310625	BZ180004	CE,10MFD,SSM,16V,M	26
C214	15715R00E	BZ180038	CI,5PF,2125,CH,50V,C	1
C216, C237	157A1030E	BZ180022	CI,0.01MFD,2125,B,25V,K	-
C217, C411	155322625	BZ180005	CE,22MFD,SSM,16V,M	3
C218, C222	15716800E	BZ180039	CI,68PF,2125,CH,50V,J	2
C219	15783910E	BZ180104	CAPACITOR,CHIP,390PF 50V	1
C220	15711810E	BZ180137	CAPACITOR,CHIP,180PF 50V	1
C221	15715600E	BZ180037	CI,56PF,2125,CH,50V,J	1
C223	155633525	BZ180007	CE,3.3MFD,SSM,50V,M	1
C224, C248	157A1040E	BZ180096	CI,0.1MFD,2125,B,25V,K	5
C225, C823	155647425	BZ180015	CE,0.47MFD,SSM,50V,M	2
C227, C231	157B1040E	BZ180046	CI,0.1MFD,2125,F,25V,Z	16
C228, C230	155347625	BZ180128	CE-SSM47M16-FT	6
C229, C274	1553106K5	BZ180206	CAPACITOR,ELECTROLYTIC,10UF 16V	3
C235	15714700E	BZ180044	CI,47PF,2125,CH,50V,J	1
C238, C244	157B1040E	BZ180046	CI,0.1MFD,2125,F,25V,Z	-
C239, C253	1553476G5	BZ180011	CE,47MFD,SEM.16V,M	5
C240, C243	155610525	BZ180016	CE,1MFD,SSM,50V,M	-
C241	157A4730E	BZ180029	CI,0.047MFD,2125,B,25V,K	1
C242, C259	157A1030E	BZ180022	CI,0.01MFD,2125,B,25V,K	-
C245, C415	155610525	BZ180016	CE,1MFD,SSM,50V,M	-
C247	157C4730E	BZ180103	CAPACITOR,CHIP,0.047UF 25V	-
C249, C251	155310625	BZ180004	CE,10MFD,SSM,16V,M	-
C252, C409	155447525	BZ180008	CE,4.7MFD,SSM,25V,M	2
C254, C273	157B1040E	BZ180046	CI,0.1MFD,2125,F,25V,Z	-
C256, C603	157A1040E	BZ180096	CI,0.1MFD,2125,B,25V,K	-
C260, C261	157A1030E	BZ180022	CI,0.01MFD,2125,B,25V,K	-
C270, C271	157A1030E	BZ180022	CI,0.01MFD,2125,B,25V,K	-
C272	1552107K5	BZ180204	CAPACITOR,ELECTROLYTIC,100UF 10V	1
C275, C419	157B1040E	BZ180046	CI,0.1MFD,2125,F,25V,Z	-
C276, C277	157A1030E	BZ180022	CI,0.01MFD,2125,B,25V,K	-
C278, CC06	15781210E	BZ180093	CI,120PF,2125,SL,50V,J	2
C351, CE03	157C1030E	BZ180116	CAPACITOR,CHIP,0.01UF 25V	2
C352	157C1050E	BZ180132	CAPACITOR,CHIP,1UF 16V	1
C401	153C39305	BZ180203	CAPACITOR,MYLAR,0.039UF,100V,J	1
C403	155005325	BZ180166	CAPACITOR,ELECTROLYTIC,47UF 16V BP	1
C404, C405	157A1030E	BZ180022	CI,0.01MFD,2125,B,25V,K	-
C406, CD33	157A2220E	BZ180097	CI,0.0022MFD,2125,B,50V,K	6
C407	157F1220E	BZ180150	CAPACITOR,CHIP,1200PF 50V	1
C408, C600	155310625	BZ180004	CE,10MFD,SSM,16V,M	-
C410	157F1820E	BZ180107	CAPACITOR,CHIP,1800PF 50V	1
C412, C413	157A1030E	BZ180022	CI,0.01MFD,2125,B,25V,K	-
C414, C703	157A1020E	BZ180021	CI,0.001MFD,2125,B,50V,K	-
C418	157C2240E	BZ180100	CI,0.22MFD,2125,F,25V,Z	1
C601, C607	157A1030E	BZ180022	CI,0.01MFD,2125,B,25V,K	-
C602, C707	155310625	BZ180004	CE,10MFD,SSM,16V,M	-

MAIN CIRCUIT BOARD (V-208EG/V-408EG)

NOTE: ⚠ : Safety Materials

LOCATION NO.	REFERENCE NO.	TOSHIBA PART NO.	DESCRIPTION	Q'TY
C606	157A1040E	BZ180096	CI,0.1MFD,2125,B,25V,K	-
C608, C609	157A1030E	BZ180022	CI,0.01MFD,2125,B,25V,K	-
C610, C701	157A1030E	BZ180022	CI,0.01MFD,2125,B,25V,K	-
C700	155322625	BZ180005	CE,22MFD,SSM,16V,M	-
C702, C720	157A1030E	BZ180022	CI,0.01MFD,2125,B,25V,K	-
C704, C705	157A2230E	BZ180026	CI,0.022MFD,2125,B,25V,K	4
C706, C722	157A1020E	BZ180021	CI,0.001MFD,2125,B,50V,K	-
C708	15711500E	BZ180033	CI,15PF,2125,CH,50V,J	1
C709	15711800E	BZ180034	CI,18PF,2125,CH,50V,J	1
C710, CC02	15712200E	BZ180035	CI,22PF,2125,CH,50V,J	3
C711	15711200E	BZ180043	CI,12PF,2125,CH,50V,J	1
C713, C715	157B1040E	BZ180046	CI,0.1MFD,2125,F,25V,Z	-
C716, C719	155310625	BZ180004	CE,10MFD,SSM,16V,M	-
C718, C761	15711010E	BZ180032	CI,100PF,2125,CH,50V,J	3
C721, C741	157A1030E	BZ180022	CI,0.01MFD,2125,B,25V,K	-
C740, C762	155310625	BZ180004	CE,10MFD,SSM,16V,M	-
C755	15781010E	BZ180190	CAPACITOR,CHIP,100PF 50V	1
C756, C763	155610525	BZ180016	CE,1MFD,SSM,50V,M	-
C758, C764	157B1040E	BZ180046	CI,0.1MFD,2125,F,25V,Z	-
C759, C828	155347625	BZ180128	CE-SSM47M16-FT	-
C765, C770	157A1020E	BZ180021	CI,0.001MFD,2125,B,50V,K	-
C766, C822	1553476G5	BZ180011	CE,47MFD,SEM.16V,M	-
C767, C832	155310625	BZ180004	CE,10MFD,SSM,16V,M	-
C768	157A4720E	BZ180028	CI,0.0047MFD,2125,B,25V,K	1
C769	155147625	BZ180112	CAPACITOR,ELECTROLYTIC,47UF 6.3V	1
C771, C773	157A1020E	BZ180021	CI,0.001MFD,2125,B,50V,K	-
C774, CA02	157B1040E	BZ180046	CI,0.1MFD,2125,F,25V,Z	-
⚠ C800	150908900	BZ180126	CC-CFJC22E104M	1
⚠ C801	150909823	BZ180198	CC-CS15-E2GA472MYNS-FS	1
C803, C829	150910023	BZ180199	CC-CD85-B2GA221KYNS-FS	2
C804	155K476M0	BZ180209	CAPACITOR,ELECTROLYTIC,47UF 400V	1
C805, CC09	157A2230E	BZ180026	CI,0.022MFD,2125,B,25V,K	-
C806, C821	157A1030E	BZ180022	CI,0.01MFD,2125,B,25V,K	-
C807	157A3320E	BZ180091	CI,0.0033MFD,2125,B,25V,K	1
C808	150910125	BZ180201	CC-CC45SL3AD560JYVN-FT	1
C809	150910523	BZ180173	CC-B103KYJ500-FS	1
C810	157F8220E	BZ180106	CAPACITOR,CHIP,8200PF 50V	1
⚠ C811	150910723	BZ180202	CC-CD14-E2GA332MYNS-FS	1
C812, CE02	157A3330E	BZ180102	CAPACITOR,CHIP,0.033UF 25V	3
C813	1553107T5	BZ180120	CAPACITOR,ELECTROLYTIC,100UF 16V	1
C814	1552477J4	BZ180205	CAPACITOR,ELECTROLYTIC,470UF 10V	1
C815	1551108M5	BZ180111	CAPACITOR,ELECTROLYTIC,1000U 6.3V	1
C816, C819	1556226T5	BZ180122	CAPACITOR,ELECTROLYTIC,22UF 50V	3
C817, C830	1553277J5	BZ180207	CAPACITOR,ELECTROLYTIC,270UF 16V	2
C818, C820	1553477T5	BZ180121	CAPACITOR,ELECTROLYTIC,470UF 16V	3
C824	1552227G5	BZ180014	CE,220MFD,SEM,10V,M	1
C831	1553477T5	BZ180121	CAPACITOR,ELECTROLYTIC,470UF 16V	-
C833	1556226T5	BZ180122	CAPACITOR,ELECTROLYTIC,22UF 50V	-
C850, CC03	155610525	BZ180016	CE,1MFD,SSM,50V,M	-
CA01, CA09	1552107G5	BZ180020	CE,100MFD,SEM,10V,M	4
CA03	1553476G5	BZ180011	CE,47MFD,SEM.16V,M	-
CA04, CD29	157A1020E	BZ180021	CI,0.001MFD,2125,B,50V,K	-
CA05	155510625	BZ180208	CAPACITOR,ELECTROLYTIC,10UF 35V	1

MAIN CIRCUIT BOARD (V-208EG/V-408EG)

NOTE: ○ : V-208EG, △ : V-408EG, ▲ : Safety Materials

LOCATION NO.	REFERENCE NO.	TOSHIBA PART NO.	DESCRIPTION	Q'TY
F701	1764161B0	BZ683090	X'TAL,HC-49U-16MHZ-T1	1
F702	176300500	BZ683031	X'TAL,32.768KHZ-10PPM	1
FC01	1764168B0	BZ683101	X'TAL,HC-49/U17.734475MH	1
FH801, FH802	26N20110	BZ684265	FUSE HOLDER CNT47	2
H701	143002200	BZ680072	FIP,SVV-7SS16	1
IC201	111806300	BZ681107	IC,LA71521M	1
IC203	112310303	BZ681108	IC,LC89977M-CT	1
IC350	111730300	BZ681054	IC,LA7356	1
IC600	111718200	BZ681044	IC,TA7291S	1
IC601	112293200	BZ681103	IC,TB6515AP	1
○ IC701 V-208EG	119447300	BZ681117	IC,M37779M9A-114GP	1
△ IC701 V-408EG	119460300	BZ681125	IC,M37779M9A-408EG	1
IC702	113113B03	BZ681109	IC,AT24C04N-10SC-CT	1
IC703	111721507	BZ681045	IC,PST9129T-RT	1
IC704	111658D07	BZ681106	IC,XC61AN4502TH-RT	1
IC750	111380300	BZ681005	IC,LA7116	1
▲ IC800	145300900	BZ480046	PHOTOCOUPLER,PS2561-1-MDHW-V	1
IC801	111737A07	BZ681046	IC-KIA431AT-RT	1
ICC01	119427300	BZ681110	IC,LC74763-9708	1
ICD01	111731300	BZ681078	IC,LA7156	1
ICE01	111789800	BZ681116	IC,SDA5650	1
J2AB, J4AA	165200006	BZ280035	RI,0 OHM,2125,1/10W,J	24
J600, J602	165100006	BZ280036	RI,0 OHM,3216,1/8W,J	10
J601, J606	165200006	BZ280035	RI,0 OHM,2125,1/10W,J	-
J605, J607	165100006	BZ280036	RI,0 OHM,3216,1/8W,J	-
J608, J609	165200006	BZ280035	RI,0 OHM,2125,1/10W,J	-
J610, J611	165100006	BZ280036	RI,0 OHM,3216,1/8W,J	-
J612, J615	165100006	BZ280036	RI,0 OHM,3216,1/8W,J	-
J613, J614	165200006	BZ280035	RI,0 OHM,2125,1/10W,J	-
J616, R825	165100006	BZ280036	RI,0 OHM,3216,1/8W,J	-
J617, J619	165200006	BZ280035	RI,0 OHM,2125,1/10W,J	-
J620, R204	165200006	BZ280035	RI,0 OHM,2125,1/10W,J	-
L202, L203	172025234	BZ683079	COIL,EL0305RA-101J-FT	7
L204	172025034	BZ683093	COIL,EL0305RA-470J-FT	1
L206	172015327	BZ380035	COIL,PEAKING,56UH	1
L207, L208	172025234	BZ683079	COIL,EL0305RA-101J-FT	-
L210	172025134	BZ683084	COIL,EL0305RA-680J-FT	1
L270, LC01	172025234	BZ683079	COIL,EL0305RA-101J-FT	-
L400	1710580E0	BZ683096	COIL,OSC-BIAS(5V)	1
L401	172024934	BZ683102	COIL,EL0305RA-330J-FT	1
▲ L800	173006980	BZ683099	COIL,SS10V-05180	1
L801, L802	172023534	BZ683075	COIL,ELC0607RA-220K-FT	4
L803, L804	172023534	BZ683075	COIL,ELC0607RA-220K-FT	-
LA01, LA02	172024634	BZ683083	COIL,EL0305RA-100J-FT	4
LA03	172024734	BZ683097	COIL,EL0305RA-150J-FT	1
LA04, LC03	172024634	BZ683083	COIL,EL0305RA-100J-FT	-
LC02	172026234	BZ683098	COIL,EL0305RA-5R6J-FT	1
LD701	145200100	BZ480086	PHOTODIODE,GL451V	1
LE01	172025234	BZ683079	COIL,EL0305RA-101J-FT	-
MD701	106012700	BZ680071	MODULE,GP1U291Q	1
MP300	22129070	BZ780930	HOLDER (LED)	1
MP301, MP302	22129080	BZ780931	HOLDER (SENSOR)	2
MP303	22129090	BZ780932	HOLDER (HALL-SENSOR)	1

MAIN CIRCUIT BOARD (V-208EG/V-408EG)

LOCATION NO.	REFERENCE NO.	TOSHIBA PART NO.	DESCRIPTION	Q'TY
CA06	15711010E	BZ180032	CI,100PF,2125,CH,50V,J	-
CA07, CA11	157C2230E	BZ180117	CI-2125F223Z25-CT	-
CA08, CD26	157B1040E	BZ180046	CI,0.1MFD,2125,F,25V,Z	-
CA10, CD08	1553477M5	BZ180009	CE,470MFD,DSM,16V,M	3
CA12	1553107G5	BZ180013	CE,100MFD,SEM,16V,M	1
CC01, CC11	15712700E	BZ180055	CI,27PF,2125,CH,50V,J	2
CC04	15781810E	BZ180049	CI,180PF,2125,SL,50V,J	1
CC05, CC08	155610525	BZ180016	CE,1MFD,SSM,50V,M	-
CC07	157A6810E	BZ180170	CAPACITOR,CHIP,680PF 50V	1
CC10	15712200E	BZ180035	CI,22PF,2125,CH,50V,J	-
CC12, CD24	155347625	BZ180128	CE-SSM47M16-FT	-
CC13	157A1030E	BZ180022	CI,0.01MFD,2125,B,25V,K	-
CD06, CD25	1552107G5	BZ180020	CE,100MFD,SEM,10V,M	-
CD09	155110725	BZ180213	CAPACITOR,ELECTROLYTIC,100UF,6.3V	1
CD11, CD12	155310625	BZ180004	CE,10MFD,SSM,16V,M	-
CD13, CD14	155310625	BZ180004	CE,10MFD,SSM,16V,M	-
CD15	1553477M5	BZ180009	CE,470MFD,DSM,16V,M	-
CD16, CD18	155310625	BZ180004	CE,10MFD,SSM,16V,M	-
CD17	1553106K5	BZ180206	CAPACITOR,ELECTROLYTIC,10UF 16V	-
CD19, CD20	155310625	BZ180004	CE,10MFD,SSM,16V,M	-
CD21, CD22	155310625	BZ180004	CE,10MFD,SSM,16V,M	-
CD23, CD27	155310625	BZ180004	CE,10MFD,SSM,16V,M	-
CD34, CD37	157A2220E	BZ180097	CI,0.0022MFD,2125,B,50V,K	-
CD39, CE05	157A2220E	BZ180097	CI,0.0022MFD,2125,B,50V,K	-
CD41	157A1020E	BZ180021	CI,0.001MFD,2125,B,50V,K	-
CE01	15781510E	BZ180042	CI,150PF,2125,SL,50V,J	1
CE04	157A3330E	BZ180102	CAPACITOR,CHIP,0.033UF 25V	-
D201, D202	131002101	BZ480025	DIODE,1SS254	13
D600	136400110	BZ480084	DI-HW300B-E,F	1
D701, D751	131002101	BZ480025	DIODE,1SS254	-
D800, D801	132016401	BZ480088	DIODE,D5GT	4
D802, D803	132016401	BZ480088	DIODE,D5GT	-
D804, D813	131003001	BZ480030	DIODE,1SS244T	4
D805, D809	131002101	BZ480025	DIODE,1SS254	-
D806	132018000	BZ480094	DIODE,PR1007	1
D808	134014721	BZ480044	DIODE,ZENER,MTZJ10T-C	1
D810, D811	131002101	BZ480025	DIODE,1SS254	-
D812, D824	131002101	BZ480025	DIODE,1SS254	-
D814	134015021	BZ480037	DIODE,ZENER,MTZJ6.2T-B	1
D815	134015131	BZ480038	DIODE,ZENER,MTZJ6.8T-B	1
D816, D835	132018101	BZ480095	DIODE,SB140T	2
D817, D819	131003001	BZ480030	DIODE,1SS244T	-
D818, D839	132017902	BZ480093	DIODE,PR1502-M	2
D820	134019511	BZ480029	DIODE,MTZJ33-A,B	1
D821	132016708	BZ480091	DIODE,LT2A04-E	1
D822, D831	132016501	BZ480090	DIODE,D4GT	3
D825, D851	134018111	BZ480074	DIODE,ZENER,MTZJ8.2T-B	2
D826, D850	131002101	BZ480025	DIODE,1SS254	-
D830, DC01	134014511	BZ480073	DIODE,ZENER,MTZJ5.6T-C	2
D832	132016501	BZ480090	DIODE,D4GT	-
DD20	131002101	BZ480025	DIODE,1SS254	-
ETA02	104308520	BZ680092	ELECTRONIC TUNER,TMLG1-122A	1
F201	1764139B0	BZ683037	X'TAL,HC49U-4.433619MHZ	1

MAIN CIRCUIT BOARD (V-208EG/V-408EG)

NOTE: ○ : V-208EG, △ : V-408EG, ▲ : Safety Materials

LOCATION NO.	REFERENCE NO.	TOSHIBA PART NO.	DESCRIPTION	Q'TY
MP304, MP305	22129100	BZ780933	HOLDER (SENSOR-CAP)	2
MP306	22128891	BZ780928	HOLDER (FIP-L-S2)	1
MP307	22128911	BZ780929	HOLDER (FIP-R-S2)	1
MP308	21145051	BZ780975	HEATSINK	1
MP310	2953308A	BZ780581	SCREW,3X8MM	1
MS600	100008500	BZ680073	MS-STATOR,ASS'Y	1
N201	26031020	BZ684473	GROUND CORD ##	-
N600	196313090	BZ684456	QS-CONN-IL02 ##	1
○ P200	1981334GA	BZ684445	POST-00-6232-010-006-8	1
△ P200	1981345AA	BZ684485	POST-TOC-B10X-B1 WHT	1
P400	1981335G7	BZ684415	POST-006216-007-000808	1
P401	1981340A2	BZ684447	POST-TMC-A02X-A1	1
P700	1981322AA	BZ684412	POST-TKC-G10P-A1	1
P800	198130722	BZ684318	POST-B2P3-VH	1
PD01, PD02	26563600	BZ684455	CONN HRC-021V-04	2
PI701, PI702	145400300	BZ480087	PHOTOINTERRUPTER,GP1S566	2
PQ701, PQ702	145100100	BZ480085	PHOTOTRANSISTOR,PT493F	2
Q201, Q202	123241213	BZ580009	TRANSISTOR,2SC2412K-Q,R	7
Q203, Q401	123241213	BZ580009	TRANSISTOR,2SC2412K-Q,R	-
Q270, QC01	121103713	BZ580041	TRANSISTOR,2SA1037KT-Q,R	2
Q402, QD01	123241213	BZ580009	TRANSISTOR,2SC2412K-Q,R	-
Q403	120008303	BZ580051	TRANSISTOR,RN2403T	1
Q404, Q405	124073421	BZ580053	TRANSISTOR,2SD734T-F	2
▲ Q800	123451700	BZ580029	TRANSISTOR,2SC4517	1
▲ Q801	124213201	BZ580028	TRANSISTOR,2SD2132T-V,W	1
Q802, Q805	123245811	BZ580012	TRANSISTOR,2SC2458-Y,GR	2
Q803, Q804	124158101	BZ580027	TRANSISTOR,2SD1581T-L,M	2
Q807	121102031	BZ580048	TRANSISTOR,2SA1020T-O,Y	1
Q808	120010501	BZ580044	TRANSISTOR,KRC102MT	1
QD04	123241213	BZ580009	TRANSISTOR,2SC2412K-Q,R	-
QD07	120008503	BZ580052	TRANSISTOR,RN1403T	1
R200, R757	165233106	BZ280041	RI,330 OHM,2125,1/10W,J	2
R201, R830	165218306	BZ280014	RI,18K OHM,2125,1/10W,J	2
R202	165239306	BZ280043	RI,39K OHM,2125,1/10W,J	1
R203, R778	165210406	BZ280005	RI,100K OHM,2125,1/10W,J	5
R205, R223	165247106	BZ280025	RI,470 OHM,2125,1/10W,J	4
R206, R207	165222206	BZ280016	RI,2.2K OHM,2125,1/10W,J	15
R208, R215	165222206	BZ280016	RI,2.2K OHM,2125,1/10W,J	-
R209, R245	165256206	BZ280029	RI,5.6K OHM,2125,1/10W,J	4
R210, R247	165200006	BZ280035	RI,0 OHM,2125,1/10W,J	-
R211	165212406	BZ280009	RI,120K OHM,2125,1/10W,J	1
R212	165239106	BZ280038	RI,390 OHM,2125,1/10W,J	1
R213, R821	165282106	BZ280045	RI,820 OHM,2125,1/10W,J	2
R214, R216	165215206	BZ280010	RI,1.5K OHM,2125,1/10W,J	4
R217, R234	165247206	BZ280026	RI,4.7K OHM,2125,1/10W,J	18
R218, R270	165256106	BZ280039	RI,560 OHM,2125,1/10W,J	4
R222	165268306	BZ280049	RI,68K OHM,2125,1/10W,J	1
R224, R771	165212206	BZ280007	RI,1.2K OHM,2125,1/10W,J	3
R225, R226	165282206	BZ280034	RI,8.2K OHM,2125,1/10W,J	3
R229, R402	165210206	BZ280003	RI,1K OHM,2125,1/10W,J	20
R231	165251306	BZ280142	RESISTOR,CHIP,51.0KOHM 1/10W	1
R233, R413	165212306	BZ280008	RI,12K OHM,2125,1/10W,J	5
R235, R244	165222206	BZ280016	RI,2.2K OHM,2125,1/10W,J	-

MAIN CIRCUIT BOARD (V-208EG/V-408EG)

LOCATION NO.	REFERENCE NO.	TOSHIBA PART NO.	DESCRIPTION	Q'TY
R236, R353	165233306	BZ280023	RI,33K OHM,2125,1/10W,J	2
R237	165222506	BZ280190	RESISTOR,CHIP,2.2MOHM 1/10W	1
R240, R401	165239206	BZ280040	RI,3.9K OHM,2125,1/10W,J	5
R242, R710	165247206	BZ280026	RI,4.7K OHM,2125,1/10W,J	-
R243, R772	165227206	BZ280020	RI,2.7K OHM,2125,1/10W,J	3
R246, R600	165210306	BZ280004	RI,10K OHM,2125,1/10W,J	17
R250, R756	165218206	BZ280013	RI,1.8K OHM,2125,1/10W,J	3
R351, R716	165222206	BZ280016	RI,2.2K OHM,2125,1/10W,J	-
R352, R736	165222306	BZ280017	RI,22K OHM,2125,1/10W,J	2
R403, R407	165210206	BZ280003	RI,1K OHM,2125,1/10W,J	-
R406	165247006	BZ280050	RI,47 OHM,2125,1/10W,J	1
R408	16521R006	BZ280172	RESISTOR,CHIP,1OHM 1/10W	1
R409, RC03	165215206	BZ280010	RI,1.5K OHM,2125,1/10W,J	-
R410, R737	165227306	BZ280048	RI,27K OHM,2125,1/10W,J	2
R411, R758	165233406	BZ280024	RI,330K OHM,2125,1/10W,J	2
R412	165227106	BZ280019	RI,270 OHM,2125,1/10W,J	1
R414	165282206	BZ280034	RI,8.2K OHM,2125,1/10W,J	-
R415, R738	165212306	BZ280008	RI,12K OHM,2125,1/10W,J	-
R416, R765	165200006	BZ280035	RI,0 OHM,2125,1/10W,J	-
R601, R701	165210306	BZ280004	RI,10K OHM,2125,1/10W,J	-
R605, R764	16131R004	BZ280096	RC,1 OHM,1/6W,J	2
R606, R819	165222106	BZ280015	RI,220 OHM,2125,1/10W,J	2
R607	16133R304	BZ280108	RESISTOR,CARBON,3.3OHM 1/6W	1
R700, R721	161310304	BZ280188	RESISTOR,CARBON,10KOHM 1/6W	6
R702, R777	165215306	BZ280011	RI,15K OHM,2125,1/10W,J	3
R704, R705	165247306	BZ280027	RI,47K OHM,2125,1/10W,J	6
R706, R707	165247306	BZ280027	RI,47K OHM,2125,1/10W,J	-
R709, R719	165210206	BZ280003	RI,1K OHM,2125,1/10W,J	-
R711, R712	165247206	BZ280026	RI,4.7K OHM,2125,1/10W,J	-
R713, R714	165247206	BZ280026	RI,4.7K OHM,2125,1/10W,J	-
R715, R723	165247206	BZ280026	RI,4.7K OHM,2125,1/10W,J	-
R717, R7A4	165256206	BZ280029	RI,5.6K OHM,2125,1/10W,J	-
R718, R760	165222206	BZ280016	RI,2.2K OHM,2125,1/10W,J	-
R724, R735	165247206	BZ280026	RI,4.7K OHM,2125,1/10W,J	-
R725, R726	161347204	BZ280097	RC,4.7K OHM,1/6W,J	2
R727, R734	165247306	BZ280027	RI,47K OHM,2125,1/10W,J	-
R739	165212306	BZ280008	RI,12K OHM,2125,1/10W,J	-
R740, R741	161315104	BZ280163	RESISTOR,CARBON,150OHM 1/6W	2
R742, R745	161310304	BZ280188	RESISTOR,CARBON,10KOHM 1/6W	-
R746, R775	165247206	BZ280026	RI,4.7K OHM,2125,1/10W,J	-
R747, RC08	165210106	BZ280002	RI,100 OHM,2125,1/10W,J	4
R750, R751	165210306	BZ280004	RI,10K OHM,2125,1/10W,J	-
R752, R753	165256306	BZ280083	RI,56K OHM,2125,1/10W,J	2
R754, R755	165210306	BZ280004	RI,10K OHM,2125,1/10W,J	-
R759, R816	165247106	BZ280025	RI,470 OHM,2125,1/10W,J	-
R761	165218206	BZ280013	RI,1.8K OHM,2125,1/10W,J	-
R762, R763	165210306	BZ280004	RI,10K OHM,2125,1/10W,J	-
R766, R850	165200006	BZ280035	RI,0 OHM,2125,1/10W,J	-
R769	165210606	BZ280189	RESISTOR,CHIP,10MOHM 10W	1
R770, R782	165210206	BZ280003	RI,1K OHM,2125,1/10W,J	-
R773, RC02	165222206	BZ280016	RI,2.2K OHM,2125,1/10W,J	-
R774	165233206	BZ280022	RI,3.3K OHM,2125,1/10W,J	1
R776, RC04	165268206	BZ280032	RI,6.8K,2125,1/10W,J	4

MAIN CIRCUIT BOARD (V-208EG/V-408EG)

NOTE: ○ : V-208EG, △ : V-408EG, ▲ : Safety Materials

LOCATION NO.	REFERENCE NO.	TOSHIBA PART NO.	DESCRIPTION	Q'TY
R779, R780	165210406	BZ280005	RI,100K OHM,2125,1/10W,J	-
R781, RE03	165210506	BZ280006	RI,1M OHM,2125,1/10W,J	2
△ R785, ○ R786	165210306	BZ280004	RI,10K OHM,2125,1/10W,J	-
R790, R791	165210206	BZ280003	RI,1K OHM,2125,1/10W,J	-
R792, R820	165210206	BZ280003	RI,1K OHM,2125,1/10W,J	-
R787, R793, R794	165210306	BZ280004	RI,10K OHM,2125,1/10W,J	-
R795, R796	165210306	BZ280004	RI,10K OHM,2125,1/10W,J	-
R797, R799	161310304	BZ280188	RESISTOR,CARBON,10KOHM 1/6W	-
R7A0, R812	165239206	BZ280040	RI,3.9K OHM,2125,1/10W,J	-
R7A1	161356204	BZ280192	RESISTOR,CARBON,5.6KOHM 1/6W	1
▲ R800	16C34R71A	BZ280127	RESISTOR4.7OHM 3W	1
R801, R802	161382304	BZ280123	RESISTOR,CARBON,82KOHM 1/6W	4
R803, R804	161382304	BZ280123	RESISTOR,CARBON,82KOHM 1/6W	-
R805, R806	161368304	BZ280120	RESISTOR,CARBON,68KOHM 1/6W	4
R807, R808	161368304	BZ280120	RESISTOR,CARBON,68KOHM 1/6W	-
R809, R810	161382104	BZ280122	RESISTOR,CARBON,820OHM 1/6W	2
R811	16411210A	BZ280125	RESISTOR,OXIDE METAL FILM,120OHM 1W	1
R813	16311R20A	BZ280124	RESISTOR,METAL FILM,1.2OHM 1/2W	1
R814	16D28231A	BZ280191	RESISTOR82KOHM 2W	1
R815	165227206	BZ280020	RI,2.7K OHM,2125,1/10W,J	-
R817, R818	161315204	BZ280094	RC,1.5K OHM,1/6W,J	2
R822	165C30206	BZ280104	RESISTOR,CHIP,3KOHM 1/10W	1
R823	165C20206	BZ280106	RESISTOR,CHIP,2KOHM 1/10W	1
R824	165215106	BZ280046	RI,150 OHM,2125,1/10W,J	1
R827, R833	165247206	BZ280026	RI,4.7K OHM,2125,1/10W,J	-
R828	16136R804	BZ280121	RESISTOR,CARBON,6.8OHM 1/6W	1
R832	165239206	BZ280040	RI,3.9K OHM,2125,1/10W,J	-
R839	165210006	BZ280001	RI,10 OHM,2125,1/10W,J	1
R840	165215306	BZ280011	RI,15K OHM,2125,1/10W,J	-
R841, R845	165210206	BZ280003	RI,1K OHM,2125,1/10W,J	-
R842	165210306	BZ280004	RI,10K OHM,2125,1/10W,J	-
R844, RD16	161310204	BZ280187	RESISTOR,CARBON,1KOHM 1/6W	2
R851, RC05	165210206	BZ280003	RI,1K OHM,2125,1/10W,J	-
RA01, RA03	165200006	BZ280035	RI,0 OHM,2125,1/10W,J	-
RA02	165212206	BZ280007	RI,1.2K OHM,2125,1/10W,J	-
RC01, RC06	161347104	BZ280112	RESISTOR,CARBON,470OHM 1/6W	2
RC09, RD17	165210206	BZ280003	RI,1K OHM,2125,1/10W,J	-
RD07, RD21	165222206	BZ280016	RI,2.2K OHM,2125,1/10W,J	-
RD11, RD29	165210106	BZ280002	RI,100 OHM,2125,1/10W,J	-
RD12	161310104	BZ280156	RESISTOR,CARBON,100OHM 1/6W	1
RD13, RD14	165275006	BZ280033	RI,75 OHM,2125,1/10W,J	4
RD15, RD26	165200006	BZ280035	RI,0 OHM,2125,1/10W,J	-
RD18, RD24	165275006	BZ280033	RI,75 OHM,2125,1/10W,J	-
RD25, RD93	165256106	BZ280039	RI,560 OHM,2125,1/10W,J	-
RD30, RD91	165200006	BZ280035	RI,0 OHM,2125,1/10W,J	-
RD31, RD92	165210206	BZ280003	RI,1K OHM,2125,1/10W,J	-
RD33, RD34	165247206	BZ280026	RI,4.7K OHM,2125,1/10W,J	-
RE01	165222206	BZ280016	RI,2.2K OHM,2125,1/10W,J	-
RE02	165210406	BZ280005	RI,100K OHM,2125,1/10W,J	-
RE04, RE07	165212506	BZ280157	RESISTOR,CHIP,1200KOHM 1/10W	2
RE05, RE06	165268206	BZ280032	RI,6.8K,2125,1/10W,J	-
SW700	23H10150	BZ682015	SWITCH MMS00370ZMB0	1
SW701, SW702	23A11660	BZ682016	SWITCH SKHVBD-RT	9

MAIN CIRCUIT BOARD (V-208EG/V-408EG)

NOTE: ⚠ : Safety Materials

LOCATION NO.	REFERENCE NO.	TOSHIBA PART NO.	DESCRIPTION	Q'TY
SW703, SW704	23A11660	BZ682016	SWITCH SKHVBD-RT	-
SW705, SW706	23A11660	BZ682016	SWITCH SKHVBD-RT	-
SW707, SW708	23A11660	BZ682016	SWITCH SKHVBD-RT	-
SW709	23A11660	BZ682016	SWITCH SKHVBD-RT	-
SW710	23A11630	BZ682012	SWITCH MPU10252MLB2	1
⚠ T800	174402030	BZ683100	TRANSFORMER,SWT-SRW2929ED205V011	1
⚠ Z800	26GA022	BZ684319	MINI FUSE T1.6A250V	1

MAIN CIRCUIT BOARD (V-208F / V-408F)

LOCATION NO.	REFERENCE NO.	TOSHIBA PART NO.	DESCRIPTION	Q'TY
C201, C206	157A1020E	BZ180021	CI,0.001MFD,2125,B,50V,K	13
C202, C212	157A1030E	BZ180022	CI,0.01MFD,2125,B,25V,K	37
C203, C209	157C2230E	BZ180117	CI-2125F223Z25-CT	6
C207, C234	155610525	BZ180016	CE,1MFD,SSM,50V,M	12
C208, C246	157C4730E	BZ180103	CAPACITOR,CHIP,0.047UF 25V	3
C210, C215	157C2230E	BZ180117	CI-2125F223Z25-CT	-
C211, C236	15713300E	BZ180036	CI,33PF,2125,CH,50V,J	2
C213, C232	155310625	BZ180004	CE,10MFD,SSM,16V,M	26
C214	15715R00E	BZ180038	CI,5PF,2125,CH,50V,C	1
C216, C237	157A1030E	BZ180022	CI,0.01MFD,2125,B,25V,K	-
C217, C411	155322625	BZ180005	CE,22MFD,SSM,16V,M	3
C218, C222	15716800E	BZ180039	CI,68PF,2125,CH,50V,J	2
C219	15783910E	BZ180104	CAPACITOR,CHIP,390PF 50V	1
C220	15711810E	BZ180137	CAPACITOR,CHIP,180PF 50V	1
C221	15715600E	BZ180037	CI,56PF,2125,CH,50V,J	1
C223	155633525	BZ180007	CE,3.3MFD,SSM,50V,M	1
C224, C248	157A1040E	BZ180096	CI,0.1MFD,2125,B,25V,K	7
C225, C823	155647425	BZ180015	CE,0.47MFD,SSM,50V,M	2
C227, C231	157B1040E	BZ180046	CI,0.1MFD,2125,F,25V,Z	18
C228, C230	155347625	BZ180128	CE-SSM47M16-FT	6
C229, C274	1553106K5	BZ180206	CAPACITOR,ELECTROLYTIC,10UF 16V	3
C235	15714700E	BZ180044	CI,47PF,2125,CH,50V,J	1
C238, C244	157B1040E	BZ180046	CI,0.1MFD,2125,F,25V,Z	-
C239, C253	1553476G5	BZ180011	CE,47MFD,SEM,16V,M	5
C240, C243	155610525	BZ180016	CE,1MFD,SSM,50V,M	-
C241, C311	157A4730E	BZ180029	CI,0.047MFD,2125,B,25V,K	3
C242, C259	157A1030E	BZ180022	CI,0.01MFD,2125,B,25V,K	-
C245, C415	155610525	BZ180016	CE,1MFD,SSM,50V,M	-
C247	157C4730E	BZ180103	CAPACITOR,CHIP,0.047UF 25V	-
C249, C251	155310625	BZ180004	CE,10MFD,SSM,16V,M	-
C252, C409	155447525	BZ180008	CE,4.7MFD,SSM,25V,M	2
C254, C273	157B1040E	BZ180046	CI,0.1MFD,2125,F,25V,Z	-
C256, C302	157A1040E	BZ180096	CI,0.1MFD,2125,B,25V,K	-
C260, C261	157A1030E	BZ180022	CI,0.01MFD,2125,B,25V,K	-
C270, C271	157A1030E	BZ180022	CI,0.01MFD,2125,B,25V,K	-
C272	1552107K5	BZ180204	CAPACITOR,ELECTROLYTIC,100UF 10V	1
C275, C305	157B1040E	BZ180046	CI,0.1MFD,2125,F,25V,Z	-
C276, C277	157A1030E	BZ180022	CI,0.01MFD,2125,B,25V,K	-
C278, CC06	15781210E	BZ180093	CI,120PF,2125,SL,50V,J	2
C301, C308	157A1030E	BZ180022	CI,0.01MFD,2125,B,25V,K	-
C303, C603	157A1040E	BZ180096	CI,0.1MFD,2125,B,25V,K	-
C304, C708	15711500E	BZ180033	CI,15PF,2125,CH,50V,J	2
C306	155622525	BZ180006	CE,2.2MFD,SSM,50V,M	1
C307, C812	157A3330E	BZ180102	CAPACITOR,CHIP,0.033UF 25V	2
C309, C312	157A1030E	BZ180022	CI,0.01MFD,2125,B,25V,K	-
C310, C313	157C4740E	BZ180168	CAPACITOR,CHIP,0.47UF,16V	2
C314	157A4730E	BZ180029	CI,0.047MFD,2125,B,25V,K	-
C315, C318	157A1030E	BZ180022	CI,0.01MFD,2125,B,25V,K	-
C316, C419	157B1040E	BZ180046	CI,0.1MFD,2125,F,25V,Z	-
C317, CA01	1552107G5	BZ180020	CE,100MFD,SEM,10V,M	5
C319, C322	157A1030E	BZ180022	CI,0.01MFD,2125,B,25V,K	-
C401	153C39305	BZ180203	CAPACITOR,MYLAR, 0,039UF,100V, J	1
C403	155005325	BZ180166	CAPACITOR,ELECTROLYTIC,47UF 16V BP	1

MAIN CIRCUIT BOARD (V-208F / V-408F)

NOTE: ▲ : Safety Materials

LOCATION NO.	REFERENCE NO.	TOSHIBA PART NO.	DESCRIPTION	Q'TY
C404, C405	157A1030E	BZ180022	CI,0.01MFD,2125,B,25V,K	-
C406, CD33	157A2220E	BZ180097	CI,0.0022MFD,2125,B,50V,K	5
C407	157F1220E	BZ180150	CAPACITOR,CHIP,1200PF 50V	1
C408, C600	155310625	BZ180004	CE,10MFD,SSM,16V,M	-
C410	157F1820E	BZ180107	CAPACITOR,CHIP,1800PF 50V	1
C412, C413	157A1030E	BZ180022	CI,0.01MFD,2125,B,25V,K	-
C414, C703	157A1020E	BZ180021	CI,0.001MFD,2125,B,50V,K	-
C418	157C2240E	BZ180100	CI,0.22MFD,2125,F,25V,Z	1
C601, C607	157A1030E	BZ180022	CI,0.01MFD,2125,B,25V,K	-
C602, C707	155310625	BZ180004	CE,10MFD,SSM,16V,M	-
C606	157A1040E	BZ180096	CI,0.1MFD,2125,B,25V,K	-
C608, C609	157A1030E	BZ180022	CI,0.01MFD,2125,B,25V,K	-
C610, C701	157A1030E	BZ180022	CI,0.01MFD,2125,B,25V,K	-
C700	155322625	BZ180005	CE,22MFD,SSM,16V,M	-
C702, C720	157A1030E	BZ180022	CI,0.01MFD,2125,B,25V,K	-
C704, C705	157A2230E	BZ180026	CI,0.022MFD,2125,B,25V,K	4
C706, C722	157A1020E	BZ180021	CI,0.001MFD,2125,B,50V,K	-
C709	15711800E	BZ180034	CI,18PF,2125,CH,50V,J	1
C710, CC02	15712200E	BZ180035	CI,22PF,2125,CH,50V,J	3
C711	15711200E	BZ180043	CI,12PF,2125,CH,50V,J	1
C712	15784710E	BZ180131	CAPACITOR,CHIP,470PF 50V	1
C713, C715	157B1040E	BZ180046	CI,0.1MFD,2125,F,25V,Z	-
C716, C719	155310625	BZ180004	CE,10MFD,SSM,16V,M	-
C718, C761	15711010E	BZ180032	CI,100PF,2125,CH,50V,J	3
C721, C741	157A1030E	BZ180022	CI,0.01MFD,2125,B,25V,K	-
C740, C762	155310625	BZ180004	CE,10MFD,SSM,16V,M	-
C755	15781010E	BZ180190	CAPACITOR,CHIP,100PF 50V	1
C756, C763	155610525	BZ180016	CE,1MFD,SSM,50V,M	-
C758, C764	157B1040E	BZ180046	CI,0.1MFD,2125,F,25V,Z	-
C759, C828	155347625	BZ180128	CE-SSM47M16-FT	-
C765, C770	157A1020E	BZ180021	CI,0.001MFD,2125,B,50V,K	-
C766, C822	1553476G5	BZ180011	CE,47MFD,SEM.16V,M	-
C767, C832	155310625	BZ180004	CE,10MFD,SSM,16V,M	-
C768	157A4720E	BZ180028	CI,0.0047MFD,2125,B,25V,K	1
C769	155147625	BZ180112	CAPACITOR,ELECTROLYTIC,47UF 6.3V	1
C771, C773	157A1020E	BZ180021	CI,0.001MFD,2125,B,50V,K	-
C774, CA02	157B1040E	BZ180046	CI,0.1MFD,2125,F,25V,Z	-
▲ C800	150908900	BZ180126	CC-CFJC22E104M	1
▲ C801	150909823	BZ180198	CC-CS15-E2GA472MYNS-FS	1
C803, C829	150910023	BZ180199	CC-CD85-B2GA221KYNS-FS	2
C804	155K476M0	BZ180209	CAPACITOR,ELECTROLYTIC,47UF 400V	1
C805, CC09	157A2230E	BZ180026	CI,0.022MFD,2125,B,25V,K	-
C806, C821	157A1030E	BZ180022	CI,0.01MFD,2125,B,25V,K	-
C807	157A3320E	BZ180091	CI,0.0033MFD,2125,B,25V,K	1
C808	150910125	BZ180201	CC-CC45SL3AD560JYVN-FT	1
C809	150910523	BZ180173	CC-B103KYJ500-FS	1
C810	157F8220E	BZ180106	CAPACITOR,CHIP,8200PF 50V	1
▲ C811	150910723	BZ180202	CC-CD14-E2GA332MYNS-FS	1
C813	1553107T5	BZ180120	CAPACITOR,ELECTROLYTIC,100UF 16V	1
C814	1552477J4	BZ180205	CAPACITOR,ELECTROLYTIC,470UF 10V	1
C815	1551108M5	BZ180111	CAPACITOR,ELECTROLYTIC,1000U 6.3V	1
C816, C819	1556226T5	BZ180122	CAPACITOR,ELECTROLYTIC,22UF 50V	3
C817, C830	1553277J5	BZ180207	CAPACITOR,ELECTROLYTIC,270UF 16V	2

MAIN CIRCUIT BOARD (V-208F / V-408F)

LOCATION NO.	REFERENCE NO.	TOSHIBA PART NO.	DESCRIPTION	Q'TY
C818, C820	1553477T5	BZ180121	CAPACITOR,ELECTROLYTIC,470UF 16V	3
C824	1552227G5	BZ180014	CE,220MFD,SEM,10V,M	1
C831	1553477T5	BZ180121	CAPACITOR,ELECTROLYTIC,470UF 16V	-
C833	1556226T5	BZ180122	CAPACITOR,ELECTROLYTIC,22UF 50V	-
C850, CC03	155610525	BZ180016	CE,1MFD,SSM,50V,M	-
CA03	1553476G5	BZ180011	CE,47MFD,SEM,16V,M	-
CA04, CD29	157A1020E	BZ180021	CI,0.001MFD,2125,B,50V,K	-
CA05	155510625	BZ180208	CAPACITOR,ELECTROLYTIC,10UF 35V	1
CA06	15711010E	BZ180032	CI,100PF,2125,CH,50V,J	-
CA07, CA11	157C2230E	BZ180117	CI-2125F223Z25-CT	-
CA08, CD26	157B1040E	BZ180046	CI,0.1MFD,2125,F,25V,Z	-
CA09, CD06	1552107G5	BZ180020	CE,100MFD,SEM,10V,M	-
CA10, CD08	1553477M5	BZ180009	CE,470MFD,DSM,16V,M	3
CA12	1553107G5	BZ180013	CE,100MFD,SEM,16V,M	1
CC01, CC11	15712700E	BZ180055	CI,27PF,2125,CH,50V,J	2
CC04	15781810E	BZ180049	CI,180PF,2125,SL,50V,J	1
CC05, CC08	155610525	BZ180016	CE,1MFD,SSM,50V,M	-
CC07	157A6810E	BZ180170	CAPACITOR,CHIP,680PF 50V	1
CC10	15712200E	BZ180035	CI,22PF,2125,CH,50V,J	-
CC12, CD24	155347625	BZ180128	CE-SSM47M16-FT	-
CC13	157A1030E	BZ180022	CI,0.01MFD,2125,B,25V,K	-
CD09	155110725	BZ180213	CAPACITOR,ELECTROLYTIC,100UF 6.3V	1
CD11, CD12	155310625	BZ180004	CE,10MFD,SSM,16V,M	-
CD13, CD14	155310625	BZ180004	CE,10MFD,SSM,16V,M	-
CD15	1553477M5	BZ180009	CE,470MFD,DSM,16V,M	-
CD16, CD18	155310625	BZ180004	CE,10MFD,SSM,16V,M	-
CD17	1553106K5	BZ180206	CAPACITOR,ELECTROLYTIC,10UF 16V	-
CD19, CD20	155310625	BZ180004	CE,10MFD,SSM,16V,M	-
CD21, CD22	155310625	BZ180004	CE,10MFD,SSM,16V,M	-
CD23, CD27	155310625	BZ180004	CE,10MFD,SSM,16V,M	-
CD25	1552107G5	BZ180020	CE,100MFD,SEM,10V,M	-
CD34, CD37	157A2220E	BZ180097	CI,0.0022MFD,2125,B,50V,K	-
CD39	157A2220E	BZ180097	CI,0.0022MFD,2125,B,50V,K	-
CD41	157A1020E	BZ180021	CI,0.001MFD,2125,B,50V,K	-
D201, D202	131002101	BZ480025	DIODE,1SS254	13
D600	136400110	BZ480084	DI-HW300B-E,F	1
D701, D751	131002101	BZ480025	DIODE,1SS254	-
D800, D801	132016401	BZ480088	DIODE,D5GT	4
D802, D803	132016401	BZ480088	DIODE,D5GT	-
D804, D813	131003001	BZ480030	DIODE,1SS244T	4
D805, D809	131002101	BZ480025	DIODE,1SS254	-
D806	132018000	BZ480094	DIODE,PR1007	1
D808	134014721	BZ480044	DIODE,ZENER,MTZJ10T-C	1
D810, D811	131002101	BZ480025	DIODE,1SS254	-
D812, D824	131002101	BZ480025	DIODE,1SS254	-
D814	134015021	BZ480037	DIODE,ZENER,MTZJ6.2T-B	1
D815	134015131	BZ480038	DIODE,ZENER,MTZJ6.8T-B	1
D816, D835	132018101	BZ480095	DIODE,SB140T	2
D817, D819	131003001	BZ480030	DIODE,1SS244T	-
D818, D839	132017902	BZ480093	DIODE,PR1502-M	2
D820	134019511	BZ480029	DIODE,MTZJ33-A,B	1
D821	132016708	BZ480091	DIODE,LT2A04-E	1
D822, D831	132016501	BZ480090	DIODE,D4GT	3

MAIN CIRCUIT BOARD (V-208F / V-408F)

NOTE: ▲ : Safety Materials

LOCATION NO.	REFERENCE NO.	TOSHIBA PART NO.	DESCRIPTION	Q'TY
D825, D851	134018111	BZ480074	DIODE,ZENER,MTZJ8.2T-B	2
D826, D850	131002101	BZ480025	DIODE,1SS254	-
D830, DC01	134014511	BZ480073	DIODE,ZENER,MTZJ5.6T-C	2
D832	132016501	BZ480090	DIODE,D4GT	-
DD20	131002101	BZ480025	DIODE,1SS254	-
ETA02	104308020	BZ680094	ELECTRONIC TUNER,TMLZ2-202A	1
F201	1764139B0	BZ683037	X'TAL,HC49U-4.433619MHZ	1
F301	1764170C0	BZ683103	X'TAL,HC-49/U-4.286MHZ	1
F701	1764161B0	BZ683090	X'TAL,HC-49U-16MHZ-T1	1
F702	176300500	BZ683031	X'TAL,32.768KHZ-10PPM	1
FC01	1764168B0	BZ683101	X'TAL,HC-49/U17.734475MH	1
FH801, FH802	26N20110	BZ684265	FUSE HOLDER CNT47	2
H701	143002200	BZ680072	FIP,SVV-7SS16	1
IC201	111806300	BZ681107	IC,LA71521M	1
IC203	112310303	BZ681108	IC,LC89977M-CT	1
IC301	111790200	BZ681088	IC,TA1238N	1
IC600	111718200	BZ681044	IC,TA7291S	1
IC601	112293200	BZ681103	IC,TB6515AP	1
IC701	119446300	BZ681118	IC,M37779M9A-113GP	1
IC702	113113B03	BZ681109	IC,AT24C04N-10SC-CT	1
IC703	111721507	BZ681045	IC,PST9129T-RT	1
IC704	111658D07	BZ681106	IC,XC61AN4502TH-RT	1
IC750	111380300	BZ681005	IC,LA7116	1
▲ IC800	145300900	BZ480046	PHOTOCOUPLER,PS2561-1-MDHW-V	1
IC801	111737A07	BZ681046	IC-KIA431AT-RT	1
ICC01	119427300	BZ681110	IC,LC74763-9708	1
ICD01	111731300	BZ681078	IC,LA7156	1
J2AB, J4AA	165200006	BZ280035	RI,0 OHM,2125,1/10W,J	21
J600, J602	165100006	BZ280036	RI,0 OHM,3216,1/8W,J	10
J601, J608	165200006	BZ280035	RI,0 OHM,2125,1/10W,J	-
J605, J607	165100006	BZ280036	RI,0 OHM,3216,1/8W,J	-
J609, J613	165200006	BZ280035	RI,0 OHM,2125,1/10W,J	-
J610, J611	165100006	BZ280036	RI,0 OHM,3216,1/8W,J	-
J612, J615	165100006	BZ280036	RI,0 OHM,3216,1/8W,J	-
J614, J617	165200006	BZ280035	RI,0 OHM,2125,1/10W,J	-
J616, R825	165100006	BZ280036	RI,0 OHM,3216,1/8W,J	-
J620, R204	165200006	BZ280035	RI,0 OHM,2125,1/10W,J	-
L202, L203	172025234	BZ683079	COIL,EL0305RA-101J-FT	6
L204	172025034	BZ683093	COIL,EL0305RA-470J-FT	1
L206	172015327	BZ380035	COIL,PEAKING,56UH	1
L207, L270	172025234	BZ683079	COIL,EL0305RA-101J-FT	-
L210	172025134	BZ683084	COIL,EL0305RA-680J-FT	1
L301, LC01	172025234	BZ683079	COIL,EL0305RA-101J-FT	-
L400	1710580E0	BZ683096	COIL,OSC-BIAS(5V)	1
L401	172024934	BZ683102	COIL,EL0305RA-330J-FT	1
▲ L800	173006980	BZ683099	COIL,SS10V-05180	1
L801, L802	172023534	BZ683075	COIL,ELC0607RA-220K-FT	4
L803, L804	172023534	BZ683075	COIL,ELC0607RA-220K-FT	-
LA01, LA02	172024634	BZ683083	COIL,EL0305RA-100J-FT	4
LA03	172024734	BZ683097	COIL,EL0305RA-150J-FT	1
LA04, LC03	172024634	BZ683083	COIL,EL0305RA-100J-FT	-
LC02	172026234	BZ683098	COIL,EL0305RA-5R6J-FT	1
LD701	145200100	BZ480086	PHOTODIODE,GL451V	1

MAIN CIRCUIT BOARD (V-208F / V-408F)

NOTE: ▲ : Safety Materials

LOCATION NO.	REFERENCE NO.	TOSHIBA PART NO.	DESCRIPTION	Q'TY
MD701	106012700	BZ680071	MODULE,GP1U291Q	1
MP300	22129070	BZ780930	HOLDER (LED)	1
MP301, MP302	22129080	BZ780931	HOLDER (SENSOR)	2
MP303	22129090	BZ780932	HOLDER (HALL-SENSOR)	1
MP304, MP305	22129100	BZ780933	HOLDER (SENSOR-CAP)	2
MP306	22128891	BZ780928	HOLDER (FIP-L-S2)	1
MP307	22128911	BZ780929	HOLDER (FIP-R-S2)	1
MP308	21145051	BZ780975	HEATSINK	1
MP310	2953308A	BZ780581	SCREW,3X8MM	1
MS600	100008500	BZ680073	MS-STATOR,ASS'Y	1
N201	26031020	BZ684473	GROUND CORD ##	1
N600	196313090	BZ684456	QS-CONN-IL02 ##	1
P200	1981334GA	BZ684445	POST-00-6232-010-006-8	1
P400	1981335G7	BZ684415	POST-006216-007-000808	1
P401	1981340A2	BZ684447	POST-TMC-A02X-A1	1
P700	1981322AA	BZ684412	POST-TKC-G10P-A1	1
P800	198130722	BZ684318	POST-B2P3-VH	1
PD01, PD02	26563600	BZ684455	CONN HRC-021V-04	2
PI701, PI702	145400300	BZ480087	PHOTOINTERRUPTER,GP1S566	2
PQ701, PQ702	145100100	BZ480085	PHOTOTRANSISTOR,PT493F	2
Q201, Q202	123241213	BZ580009	TRANSISTOR,2SC2412K-Q,R	9
Q203, Q301	123241213	BZ580009	TRANSISTOR,2SC2412K-Q,R	-
Q270, QC01	121103713	BZ580041	TRANSISTOR,2SA1037KT-Q,R	2
Q302, Q401	123241213	BZ580009	TRANSISTOR,2SC2412K-Q,R	-
Q402, QD01	123241213	BZ580009	TRANSISTOR,2SC2412K-Q,R	-
Q403	120008303	BZ580051	TRANSISTOR,RN2403T	1
Q404, Q405	124073421	BZ580053	TRANSISTOR,2SD734T-F	2
▲ Q800	123451700	BZ580029	TRANSISTOR,2SC4517	1
▲ Q801	124213201	BZ580028	TRANSISTOR,2SD2132T-V,W	1
Q802, Q805	123245811	BZ580012	TRANSISTOR,2SC2458-Y,GR	2
Q803, Q804	124158101	BZ580027	TRANSISTOR,2SD1581T-L,M	2
Q807	121102031	BZ580048	TRANSISTOR,2SA1020T-O,Y	1
Q808	120010501	BZ580044	TRANSISTOR,KRC102MT	1
QD04	123241213	BZ580009	TRANSISTOR,2SC2412K-Q,R	-
QD07	120008503	BZ580052	TRANSISTOR,RN1403T	1
R200, R316	165233106	BZ280041	RI,330 OHM,2125,1/10W,J	3
R201, R830	165218306	BZ280014	RI,18K OHM,2125,1/10W,J	2
R202	165239306	BZ280043	RI,39K OHM,2125,1/10W,J	1
R203, R778	165210406	BZ280005	RI,100K OHM,2125,1/10W,J	4
R205, R223	165247106	BZ280025	RI,470 OHM,2125,1/10W,J	4
R206, R207	165222206	BZ280016	RI,2.2K OHM,2125,1/10W,J	15
R208, R215	165222206	BZ280016	RI,2.2K OHM,2125,1/10W,J	-
R209, R245	165256206	BZ280029	RI,5.6K OHM,2125,1/10W,J	4
R210, R416	165200006	BZ280035	RI,0 OHM,2125,1/10W,J	-
R211	165212406	BZ280009	RI,120K OHM,2125,1/10W,J	1
R212	165239106	BZ280038	RI,390 OHM,2125,1/10W,J	1
R213, R315	165282106	BZ280045	RI,820 OHM,2125,1/10W,J	3
R214, R216	165215206	BZ280010	RI,1.5K OHM,2125,1/10W,J	4
R217, R234	165247206	BZ280026	RI,4.7K OHM,2125,1/10W,J	19
R218, R270	165256106	BZ280039	RI,560 OHM,2125,1/10W,J	4
R222	165268306	BZ280049	RI,68K OHM,2125,1/10W,J	1
R224, R771	165212206	BZ280007	RI,1.2K OHM,2125,1/10W,J	3
R225, R226	165282206	BZ280034	RI,8.2K OHM,2125,1/10W,J	3

MAIN CIRCUIT BOARD (V-208F / V-408F)

LOCATION NO.	REFERENCE NO.	TOSHIBA PART NO.	DESCRIPTION	Q'TY
R229, R303	165210206	BZ280003	RI,1K OHM,2125,1/10W,J	23
R231	165251306	BZ280142	RESISTOR,CHIP,51.0KOHM 1/10W	1
R233, R413	165212306	BZ280008	RI,12K OHM,2125,1/10W,J	5
R235, R244	165222206	BZ280016	RI,2.2K OHM,2125,1/10W,J	-
R236	165233306	BZ280023	RI,33K OHM,2125,1/10W,J	1
R237	165222506	BZ280190	RESISTOR,CHIP,2.2MOHM 1/10W	1
R240, R308	165239206	BZ280040	RI,3.9K OHM,2125,1/10W,J	7
R242, R309	165247206	BZ280026	RI,4.7K OHM,2125,1/10W,J	-
R243, R772	165227206	BZ280020	RI,2.7K OHM,2125,1/10W,J	3
R246, R314	165210306	BZ280004	RI,10K OHM,2125,1/10W,J	18
R250, R756	165218206	BZ280013	RI,1.8K OHM,2125,1/10W,J	3
R271, R774	165233206	BZ280022	RI,3.3K OHM,2125,1/10W,J	2
R304, R305	165210206	BZ280003	RI,1K OHM,2125,1/10W,J	-
R306, R307	165222206	BZ280016	RI,2.2K OHM,2125,1/10W,J	-
R310, R824	165215106	BZ280046	RI,150 OHM,2125,1/10W,J	2
R311, R776	165268206	BZ280032	RI,6.8K,2125,1/10W,J	3
R313, R401	165239206	BZ280040	RI,3.9K OHM,2125,1/10W,J	-
R402, R403	165210206	BZ280003	RI,1K OHM,2125,1/10W,J	-
R406	165247006	BZ280050	RI,47 OHM,2125,1/10W,J	1
R407, R709	165210206	BZ280003	RI,1K OHM,2125,1/10W,J	-
R408	16521R006	BZ280172	RESISTOR,CHIP,1OHM 1/10W	1
R409, RC03	165215206	BZ280010	RI,1.5K OHM,2125,1/10W,J	-
R410, R737	165227306	BZ280048	RI,27K OHM,2125,1/10W,J	2
R411, R758	165233406	BZ280024	RI,330K OHM,2125,1/10W,J	2
R412	165227106	BZ280019	RI,270 OHM,2125,1/10W,J	1
R414	165282206	BZ280034	RI,8.2K OHM,2125,1/10W,J	-
R415, R738	165212306	BZ280008	RI,12K OHM,2125,1/10W,J	-
R600, R601	165210306	BZ280004	RI,10K OHM,2125,1/10W,J	-
R605, R764	16131R004	BZ280096	RC,1 OHM,1/6W,J	2
R606, R819	165222106	BZ280015	RI,220 OHM,2125,1/10W,J	2
R607	16133R304	BZ280108	RESISTOR,CARBON,3.3OHM 1/6W	1
R700, R721	161310304	BZ280188	RESISTOR,CARBON,10KOHM 1/6W	5
R701, R750	165210306	BZ280004	RI,10K OHM,2125,1/10W,J	-
R702, R777	165215306	BZ280011	RI,15K OHM,2125,1/10W,J	3
R704, R705	165247306	BZ280027	RI,47K OHM,2125,1/10W,J	6
R706, R707	165247306	BZ280027	RI,47K OHM,2125,1/10W,J	-
R710, R711	165247206	BZ280026	RI,4.7K OHM,2125,1/10W,J	-
R712, R713	165247206	BZ280026	RI,4.7K OHM,2125,1/10W,J	-
R714, R715	165247206	BZ280026	RI,4.7K OHM,2125,1/10W,J	-
R716, R718	165222206	BZ280016	RI,2.2K OHM,2125,1/10W,J	-
R717, R7A4	165256206	BZ280029	RI,5.6K OHM,2125,1/10W,J	-
R719, R770	165210206	BZ280003	RI,1K OHM,2125,1/10W,J	-
R723, R724	165247206	BZ280026	RI,4.7K OHM,2125,1/10W,J	-
R725, R726	161347204	BZ280097	RC,4.7K OHM,1/6W,J	2
R727, R734	165247306	BZ280027	RI,47K OHM,2125,1/10W,J	-
R735, R746	165247206	BZ280026	RI,4.7K OHM,2125,1/10W,J	-
R736	165222306	BZ280017	RI,22K OHM,2125,1/10W,J	1
R739	165212306	BZ280008	RI,12K OHM,2125,1/10W,J	-
R740, R741	161315104	BZ280163	RESISTOR,CARBON,150OHM 1/6W	2
R742, R797	161310304	BZ280188	RESISTOR,CARBON,10KOHM 1/6W	-
R747, R789	165210106	BZ280002	RI,100 OHM,2125,1/10W,J	5
R751, R754	165210306	BZ280004	RI,10K OHM,2125,1/10W,J	-
R752, R753	165256306	BZ280083	RI,56K OHM,2125,1/10W,J	2

MAIN CIRCUIT BOARD (V-208F / V-408F)

NOTE: ○ : V-208F, △ : V-408F, ▲ : Safety Materials

LOCATION NO.	REFERENCE NO.	TOSHIBA PART NO.	DESCRIPTION	Q'TY
R755, R762	165210306	BZ280004	RI,10K OHM,2125,1/10W,J	-
R757	165233106	BZ280041	RI,330 OHM,2125,1/10W,J	-
R759, R816	165247106	BZ280025	RI,470 OHM,2125,1/10W,J	-
R760, R773	165222206	BZ280016	RI,2.2K OHM,2125,1/10W,J	-
R761	165218206	BZ280013	RI,1.8K OHM,2125,1/10W,J	-
R763, R785	165210306	BZ280004	RI,10K OHM,2125,1/10W,J	-
R765, R766	165200006	BZ280035	RI,0 OHM,2125,1/10W,J	-
R769	165210606	BZ280189	RESISTOR,CHIP,10MOHM 10W	-
R775, R827	165247206	BZ280026	RI,4.7K OHM,2125,1/10W,J	-
R779, R780	165210406	BZ280005	RI,100K OHM,2125,1/10W,J	-
R781	165210506	BZ280006	RI,1M OHM,2125,1/10W,J	1
R782, R790	165210206	BZ280003	RI,1K OHM,2125,1/10W,J	-
△R785, ○R786,	165210306	BZ280004	RI,10K OHM,2125,1/10W,J	-
R787, R793	165210306	BZ280004	RI,10K OHM,2125,1/10W,J	-
R791, R792	165210206	BZ280003	RI,1K OHM,2125,1/10W,J	-
R794, R795	165210306	BZ280004	RI,10K OHM,2125,1/10W,J	-
R796, R842	165210306	BZ280004	RI,10K OHM,2125,1/10W,J	-
R799	161310304	BZ280188	RESISTOR,CARBON,10KOHM 1/6W	-
R7A0, R812	165239206	BZ280040	RI,3.9K OHM,2125,1/10W,J	-
R7A1	161356204	BZ280192	RESISTOR,CARBON,5.6KOHM 1/6W	1
▲ R800	16C34R71A	BZ280127	RESISTOR4.7OHM 3W	1
R801, R802	161382304	BZ280123	RESISTOR,CARBON,82KOHM 1/6W	4
R803, R804	161382304	BZ280123	RESISTOR,CARBON,82KOHM 1/6W	-
R805, R806	161368304	BZ280120	RESISTOR,CARBON,68KOHM 1/6W	4
R807, R808	161368304	BZ280120	RESISTOR,CARBON,68KOHM 1/6W	-
R809, R810	161382104	BZ280122	RESISTOR,CARBON,820OHM 1/6W	2
R811	16411210A	BZ280125	RESISTOR,OXIDE METAL FILM,120OHM 1W	1
R813	16311R20A	BZ280124	RESISTOR,METAL FILM,1.2OHM 1/2W	1
R814	16D28231A	BZ280191	RESISTOR82KOHM 2W	1
R815	165227206	BZ280020	RI,2.7K OHM,2125,1/10W,J	-
R817, R818	161315204	BZ280094	RC,1.5K OHM,1/6W,J	2
R820, R841	165210206	BZ280003	RI,1K OHM,2125,1/10W,J	-
R821	165282106	BZ280045	RI,820 OHM,2125,1/10W,J	-
R822	165C30206	BZ280104	RESISTOR,CHIP,3KOHM 1/10W	1
R823	165C20206	BZ280106	RESISTOR,CHIP,2KOHM 1/10W	1
R828	16136R804	BZ280121	RESISTOR,CARBON,6.8OHM 1/6W	1
R832	165239206	BZ280040	RI,3.9K OHM,2125,1/10W,J	-
R833, RD33	165247206	BZ280026	RI,4.7K OHM,2125,1/10W,J	-
R839	165210006	BZ280001	RI,10 OHM,2125,1/10W,J	1
R840	165215306	BZ280011	RI,15K OHM,2125,1/10W,J	-
R844, RD16	161310204	BZ280187	RESISTOR,CARBON,1KOHM 1/6W	2
R845, R851	165210206	BZ280003	RI,1K OHM,2125,1/10W,J	-
R850, RA01	165200006	BZ280035	RI,0 OHM,2125,1/10W,J	-
RA02	165212206	BZ280007	RI,1.2K OHM,2125,1/10W,J	-
RA03, RD15	165200006	BZ280035	RI,0 OHM,2125,1/10W,J	-
RC01, RC06	161347104	BZ280112	RESISTOR,CARBON,470OHM 1/6W	2
RC02, RD07	165222206	BZ280016	RI,2.2K OHM,2125,1/10W,J	-
RC04	165268206	BZ280032	RI,6.8K,2125,1/10W,J	-
RC05, RC09	165210206	BZ280003	RI,1K OHM,2125,1/10W,J	-
RC08, RD11	165210106	BZ280002	RI,100 OHM,2125,1/10W,J	-
RD12	161310104	BZ280156	RESISTOR,CARBON,100OHM 1/6W	1
RD13, RD14	165275006	BZ280033	RI,75 OHM,2125,1/10W,J	4
RD17, RD31	165210206	BZ280003	RI,1K OHM,2125,1/10W,J	-

MAIN CIRCUIT BOARD (V-208F / V-408F)

NOTE: ⚠ : Safety Materials

LOCATION NO.	REFERENCE NO.	TOSHIBA PART NO.	DESCRIPTION	Q'TY
RD18, RD24	165275006	BZ280033	RI,75 OHM,2125,1/10W,J	-
RD21	165222206	BZ280016	RI,2.2K OHM,2125,1/10W,J	-
RD25, RD93	165256106	BZ280039	RI,560 OHM,2125,1/10W,J	-
RD26, RD30	165200006	BZ280035	RI,0 OHM,2125,1/10W,J	-
RD29	165210106	BZ280002	RI,100 OHM,2125,1/10W,J	-
RD34	165247206	BZ280026	RI,4.7K OHM,2125,1/10W,J	-
RD91	165200006	BZ280035	RI,0 OHM,2125,1/10W,J	-
RD92	165210206	BZ280003	RI,1K OHM,2125,1/10W,J	-
SW700	23H10150	BZ682015	SWITCH MMS00370ZMB0	1
SW701, SW702	23A11660	BZ682016	SWITCH SKHVBD-RT	9
SW703, SW704	23A11660	BZ682016	SWITCH SKHVBD-RT	-
SW705, SW706	23A11660	BZ682016	SWITCH SKHVBD-RT	-
SW707, SW708	23A11660	BZ682016	SWITCH SKHVBD-RT	-
SW709	23A11660	BZ682016	SWITCH SKHVBD-RT	-
SW710	23A11630	BZ682012	SWITCH MPU10252MLB2	1
⚠ T800	174402030	BZ683100	TRANSFORMER,SWT-SRW2929ED205V011	1
⚠ Z800	26GA022	BZ684319	MINI FUSE T1.6A250V	1

MAIN CIRCUIT BOARD (V-208CZR)

LOCATION NO.	REFERENCE NO.	TOSHIBA PART NO.	DESCRIPTION	Q'TY
C201, C206	157A1020E	BZ180021	CI,0.001MFD,2125,B,50V,K	10
C202, C212	157A1030E	BZ180022	CI,0.01MFD,2125,B,25V,K	29
C203, C209	157C2230E	BZ180117	CI-2125F223Z25-CT	6
C207, C234	155610525	BZ180016	CE,1MFD,SSM,50V,M	12
C208, C246	157C4730E	BZ180103	CAPACITOR,CHIP,0.047UF 25V	3
C210, C215	157C2230E	BZ180117	CI-2125F223Z25-CT	-
C211, C236	15713300E	BZ180036	CI,33PF,2125,CH,50V,J	2
C213, C232	155310625	BZ180004	CE,10MFD,SSM,16V,M	15
C214	15715R00E	BZ180038	CI,5PF,2125,CH,50V,C	1
C216, C237	157A1030E	BZ180022	CI,0.01MFD,2125,B,25V,K	-
C217, C411	155322625	BZ180005	CE,22MFD,SSM,16V,M	3
C218, C222	15716800E	BZ180039	CI,68PF,2125,CH,50V,J	2
C219	15783910E	BZ180104	CAPACITOR,CHIP,390PF 50V	1
C220	15711810E	BZ180137	CAPACITOR,CHIP,180PF 50V	1
C221	15715600E	BZ180037	CI,56PF,2125,CH,50V,J	1
C223	155633525	BZ180007	CE,3.3MFD,SSM,50V,M	1
C224, C226	157A1040E	BZ180096	CI,0.1MFD,2125,B,25V,K	7
C225, C823	155647425	BZ180015	CE,0.47MFD,SSM,50V,M	2
C227, C231	157B1040E	BZ180046	CI,0.1MFD,2125,F,25V,Z	15
C228, C230	155347625	BZ180128	CE-SSM47M16-FT	5
C229, C274	1553106K5	BZ180206	CAPACITOR,ELECTROLYTIC,10UF 16V	2
C235	15714700E	BZ180044	CI,47PF,2125,CH,50V,J	1
C238, C244	157B1040E	BZ180046	CI,0.1MFD,2125,F,25V,Z	-
C239, C253	1553476G5	BZ180011	CE,47MFD,SEM.16V,M	5
C240, C243	155610525	BZ180016	CE,1MFD,SSM,50V,M	-
C241	157A4730E	BZ180029	CI,0.047MFD,2125,B,25V,K	1
C242, C259	157A1030E	BZ180022	CI,0.01MFD,2125,B,25V,K	-
C245, C415	155610525	BZ180016	CE,1MFD,SSM,50V,M	-
C247	157C4730E	BZ180103	CAPACITOR,CHIP,0.047UF 25V	-
C248, C250	157A1040E	BZ180096	CI,0.1MFD,2125,B,25V,K	-
C249, C251	155310625	BZ180004	CE,10MFD,SSM,16V,M	-
C252, C409	155447525	BZ180008	CE,4.7MFD,SSM,25V,M	2
C254, C273	157B1040E	BZ180046	CI,0.1MFD,2125,F,25V,Z	-
C255	157A1520E	BZ180094	CI,0.0015MFD,2125,B,50V,K	1
C256, C603	157A1040E	BZ180096	CI,0.1MFD,2125,B,25V,K	-
C260, C261	157A1030E	BZ180022	CI,0.01MFD,2125,B,25V,K	-
C270, C271	157A1030E	BZ180022	CI,0.01MFD,2125,B,25V,K	-
C272	1552107K5	BZ180204	CAPACITOR,ELECTROLYTIC,100UF 10V	1
C275, C419	157B1040E	BZ180046	CI,0.1MFD,2125,F,25V,Z	-
C276, C277	157A1030E	BZ180022	CI,0.01MFD,2125,B,25V,K	-
C278, CC06	15781210E	BZ180093	CI,120PF,2125,SL,50V,J	2
C351	157C1030E	BZ180116	CAPACITOR,CHIP,0.01UF 25V	1
C352	157C1050E	BZ180132	CAPACITOR,CHIP,1UF 16V	1
C401	153C39305	BZ180203	CAPACITOR,MYLAR,0,039UF,100V, J	1
C403	155005325	BZ180166	CAPACITOR,ELECTROLYTIC,47UF 16V BP	1
C404, C405	157A1030E	BZ180022	CI,0.01MFD,2125,B,25V,K	-
C406, CD33	157A2220E	BZ180097	CI,0.0022MFD,2125,B,50V,K	2
C407	157F1220E	BZ180150	CAPACITOR,CHIP,1200PF 50V	1
C408, C600	155310625	BZ180004	CE,10MFD,SSM,16V,M	-
C410	157F1820E	BZ180107	CAPACITOR,CHIP,1800PF 50V	1
C412, C413	157A1030E	BZ180022	CI,0.01MFD,2125,B,25V,K	-
C414	15788210E	BZ180210	CAPACITOR,CHIP,820PF 50V	1
C418	157C2240E	BZ180100	CI,0.22MFD,2125,F,25V,Z	1

MAIN CIRCUIT BOARD (V-208CZR)

NOTE: ▲ : Safety Materials

LOCATION NO.	REFERENCE NO.	TOSHIBA PART NO.	DESCRIPTION	Q'TY
C601, C607	157A1030E	BZ180022	CI,0.01MFD,2125,B,25V,K	-
C602, C707	155310625	BZ180004	CE,10MFD,SSM,16V,M	-
C606	157A1040E	BZ180096	CI,0.1MFD,2125,B,25V,K	-
C608, C609	157A1030E	BZ180022	CI,0.01MFD,2125,B,25V,K	-
C610, C701	157A1030E	BZ180022	CI,0.01MFD,2125,B,25V,K	-
C700	155322625	BZ180005	CE,22MFD,SSM,16V,M	-
C702, C720	157A1030E	BZ180022	CI,0.01MFD,2125,B,25V,K	-
C703, C706	157A1020E	BZ180021	CI,0.001MFD,2125,B,50V,K	-
C704, C705	157A2230E	BZ180026	CI,0.022MFD,2125,B,25V,K	4
C708	15711500E	BZ180033	CI,15PF,2125,CH,50V,J	1
C709	15711800E	BZ180034	CI,18PF,2125,CH,50V,J	1
C710, CC02	15712200E	BZ180035	CI,22PF,2125,CH,50V,J	3
C711	15711200E	BZ180043	CI,12PF,2125,CH,50V,J	1
C713, C715	157B1040E	BZ180046	CI,0.1MFD,2125,F,25V,Z	-
C716, C719	155310625	BZ180004	CE,10MFD,SSM,16V,M	-
C718, C761	15711010E	BZ180032	CI,100PF,2125,CH,50V,J	3
C721, C741	157A1030E	BZ180022	CI,0.01MFD,2125,B,25V,K	-
C722, C765	157A1020E	BZ180021	CI,0.001MFD,2125,B,50V,K	-
C740, C762	155310625	BZ180004	CE,10MFD,SSM,16V,M	-
C755	15781010E	BZ180190	CAPACITOR,CHIP,100PF 50V	1
C756, C763	155610525	BZ180016	CE,1MFD,SSM,50V,M	-
C758, C764	157B1040E	BZ180046	CI,0.1MFD,2125,F,25V,Z	-
C759, C828	155347625	BZ180128	CE-SSM47M16-FT	-
C766, C822	1553476G5	BZ180011	CE,47MFD,SEM,16V,M	-
C767, C832	155310625	BZ180004	CE,10MFD,SSM,16V,M	-
C768	157A4720E	BZ180028	CI,0.0047MFD,2125,B,25V,K	1
C769	155147625	BZ180112	CAPACITOR,ELECTROLYTIC,47UF 6.3V	1
C770, C771	157A1020E	BZ180021	CI,0.001MFD,2125,B,50V,K	-
C773, CA04	157A1020E	BZ180021	CI,0.001MFD,2125,B,50V,K	-
C774, CA02	157B1040E	BZ180046	CI,0.1MFD,2125,F,25V,Z	-
▲ C800	150908900	BZ180126	CC-CFJC22E104M	1
▲ C801	150909823	BZ180198	CC-CS15-E2GA472MYNS-FS	1
C803, C829	150910023	BZ180199	CC-CD85-B2GA221KYNS-FS	2
C804	155K476M0	BZ180209	CAPACITOR,ELECTROLYTIC,47UF 400V	1
C805, CC09	157A2230E	BZ180026	CI,0.022MFD,2125,B,25V,K	-
C806, C821	157A1030E	BZ180022	CI,0.01MFD,2125,B,25V,K	-
C807	157A3320E	BZ180091	CI,0.0033MFD,2125,B,25V,K	1
C808	150910125	BZ180201	CC-CC45SL3AD560JYVN-FT	1
C809	150910523	BZ180173	CC-B103KYJ500-FS	1
C810	157F8220E	BZ180106	CAPACITOR,CHIP,8200PF 50V	1
▲ C811	150910723	BZ180202	CC-CD14-E2GA332MYNS-FS	1
C812	157A3330E	BZ180102	CAPACITOR,CHIP,0.033UF 25V	1
C813	1553107T5	BZ180120	CAPACITOR,ELECTROLYTIC,100UF 16V	1
C814	1552477J4	BZ180205	CAPACITOR,ELECTROLYTIC,470UF 10V	1
C815	1551108M5	BZ180111	CAPACITOR,ELECTROLYTIC,1000U 6.3V	1
C816, C819	1556226T5	BZ180122	CAPACITOR,ELECTROLYTIC,22UF 50V	3
C817, C830	1553277J5	BZ180207	CAPACITOR,ELECTROLYTIC,270UF 16V	2
C818, C820	1553477T5	BZ180121	CAPACITOR,ELECTROLYTIC,470UF 16V	3
C824	1552227G5	BZ180014	CE,220MFD,SEM,10V,M	1
C831	1553477T5	BZ180121	CAPACITOR,ELECTROLYTIC,470UF 16V	-
C833	1556226T5	BZ180122	CAPACITOR,ELECTROLYTIC,22UF 50V	-
C850, CC03	155610525	BZ180016	CE,1MFD,SSM,50V,M	-
CA01, CA09	1552107G5	BZ180020	CE,100MFD,SEM,10V,M	3

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LOCATION NO.	REFERENCE NO.	TOSHIBA PART NO.	DESCRIPTION	Q'TY
CA03	1553476G5	BZ180011	CE,47MFD,SEM.16V,M	-
CA05	155510625	BZ180208	CAPACITOR,ELECTROLYTIC,10UF 35V	1
CA06	15711010E	BZ180032	CI,100PF,2125,CH,50V,J	-
CA07, CA11	157C2230E	BZ180117	CI-2125F223Z25-CT	-
CA08	157B1040E	BZ180046	CI,0.1MFD,2125,F,25V,Z	-
CA10, CD28	1553477M5	BZ180009	CE,470MFD,DSM,16V,M	2
CA12	1553107G5	BZ180013	CE,100MFD,SEM,16V,M	1
CC01, CC11	15712700E	BZ180055	CI,27PF,2125,CH,50V,J	2
CC04	15781810E	BZ180049	CI,180PF,2125,SL,50V,J	1
CC05, CC08	155610525	BZ180016	CE,1MFD,SSM,50V,M	-
CC07	157A6810E	BZ180170	CAPACITOR,CHIP,680PF 50V	1
CC10	15712200E	BZ180035	CI,22PF,2125,CH,50V,J	-
CC12	155347625	BZ180128	CE-SSM47M16-FT	-
CC13	157A1030E	BZ180022	CI,0.01MFD,2125,B,25V,K	-
CD03	155310625	BZ180004	CE,10MFD,SSM,16V,M	-
CD06	1552107G5	BZ180020	CE,100MFD,SEM,10V,M	-
CD07	157A6820E	BZ180030	CI,0.0068MFD,2125,B,25V,K	1
CD40	157A1830E	BZ180196	CAPACITOR,CHIP,0.018UF 25V	1
D201, D202	131002101	BZ480025	DIODE,1SS254	13
D600	136400110	BZ480084	DI-HW300B-E,F	1
D701, D751	131002101	BZ480025	DIODE,1SS254	-
D800, D801	132016401	BZ480088	DIODE,D5GT	4
D802, D803	132016401	BZ480088	DIODE,D5GT	-
D804, D813	131003001	BZ480030	DIODE,1SS244T	4
D805, D809	131002101	BZ480025	DIODE,1SS254	-
D806	132018000	BZ480094	DIODE,PR1007	1
D808	134014721	BZ480044	DIODE,ZENER,MTZJ10T-C	1
D810, D811	131002101	BZ480025	DIODE,1SS254	-
D812, D824	131002101	BZ480025	DIODE,1SS254	-
D814	134015021	BZ480037	DIODE,ZENER,MTZJ6.2T-B	1
D815	134015131	BZ480038	DIODE,ZENER,MTZJ6.8T-B	1
D816, D835	132018101	BZ480095	DIODE,SB140T	2
D817, D819	131003001	BZ480030	DIODE,1SS244T	-
D818, D839	132017902	BZ480093	DIODE,PR1502-M	2
D820	134019511	BZ480029	DIODE,MTZJ33-A,B	1
D821	132016708	BZ480091	DIODE,LT2A04-E	1
D822, D831	132016501	BZ480090	DIODE,D4GT	3
D825, D851	134018111	BZ480074	DIODE,ZENER,MTZJ8.2T-B	2
D826, D850	131002101	BZ480025	DIODE,1SS254	-
D830, DC01	134014511	BZ480073	DIODE,ZENER,MTZJ5.6T-C	2
D832	132016501	BZ480090	DIODE,D4GT	-
DD01	131002101	BZ480025	DIODE,1SS254	-
ETA02	104308320	BZ680098	ELECTRONIC TUNER,TMLG1-309A	1
F201	1764139B0	BZ683037	X'TAL,HC49U-4.433619MHZ	1
F701	1764161B0	BZ683090	X'TAL,HC-49U-16MHZ-T1	1
F702	176300500	BZ683031	X'TAL,32.768KHZ-10PPM	1
FC01	1764168B0	BZ683101	X'TAL,HC-49/U17.734475MH	1
FH801, FH802	26N20110	BZ684265	FUSE HOLDER CNT47	2
H701	143002200	BZ680072	FIP,SVV-7SS16	1
IC201	111806300	BZ681107	IC,LA71521M	1
IC203	112310303	BZ681108	IC,LC89977M-CT	1
IC350	111730300	BZ681054	IC,LA7356	1
IC600	111718200	BZ681044	IC,TA7291S	1

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NOTE: ⚠ : Safety Materials

LOCATION NO.	REFERENCE NO.	TOSHIBA PART NO.	DESCRIPTION	Q'TY
IC601	112293200	BZ681103	IC,TB6515AP	1
IC701	119445300	BZ681120	IC,M37779M9A-118GP	1
IC702	113113B03	BZ681109	IC,AT24C04N-10SC-CT	1
IC703	111721507	BZ681045	IC,PST9129T-RT	1
IC704	111658D07	BZ681106	IC,XC61AN4502TH-RT	1
IC750	111380300	BZ681005	IC,LA7116	1
⚠ IC800	145300900	BZ480046	PHOTOCOUPLER,PS2561-1-MDHW-V	1
IC801	111737A07	BZ681046	IC-KIA431AT-RT	1
ICC01	119444300	BZ681119	IC,LC74763-9723	1
J2AB, J4AA	165200006	BZ280035	RI,0 OHM,2125,1/10W,J	19
J600, J602	165100006	BZ280036	RI,0 OHM,3216,1/8W,J	8
J601, J606	165200006	BZ280035	RI,0 OHM,2125,1/10W,J	-
J605, J610	165100006	BZ280036	RI,0 OHM,3216,1/8W,J	-
J608, J609	165200006	BZ280035	RI,0 OHM,2125,1/10W,J	-
J611, J615	165100006	BZ280036	RI,0 OHM,3216,1/8W,J	-
J613, J614	165200006	BZ280035	RI,0 OHM,2125,1/10W,J	-
J616, R825	165100006	BZ280036	RI,0 OHM,3216,1/8W,J	-
J617, J619	165200006	BZ280035	RI,0 OHM,2125,1/10W,J	-
L202, L203	172025234	BZ683079	COIL,EL0305RA-101J-FT	6
L204	172025034	BZ683093	COIL,EL0305RA-470J-FT	1
L206	172015327	BZ380035	COIL,PEAKING,56UH	1
L207, L208	172025234	BZ683079	COIL,EL0305RA-101J-FT	-
L210	172025134	BZ683084	COIL,EL0305RA-680J-FT	1
L270, LC01	172025234	BZ683079	COIL,EL0305RA-101J-FT	-
L400	1710580E0	BZ683096	COIL,OSC-BIAS(5V)	1
L401	172024934	BZ683102	COIL,EL0305RA-330J-FT	1
⚠ L800	173006980	BZ683099	COIL,SS10V-05180	1
L801, L802	172023534	BZ683075	COIL,ELC0607RA-220K-FT	4
L803, L804	172023534	BZ683075	COIL,ELC0607RA-220K-FT	-
LA03	172024734	BZ683097	COIL,EL0305RA-150J-FT	1
LC02	172026234	BZ683098	COIL,EL0305RA-5R6J-FT	1
LC03	172024634	BZ683083	COIL,EL0305RA-100J-FT	1
LD701	145200100	BZ480086	PHOTODIODE,GL451V	1
MD701	106012700	BZ680071	MODULE,GP1U291Q	1
MP300	22129070	BZ780930	HOLDER (LED)	1
MP301, MP302	22129080	BZ780931	HOLDER (SENSOR)	2
MP303	22129090	BZ780932	HOLDER (HALL-SENSOR)	1
MP304, MP305	22129100	BZ780933	HOLDER (SENSOR-CAP)	2
MP306	22128891	BZ780928	HOLDER (FI-L-S2)	1
MP307	22128911	BZ780929	HOLDER (FIP-R-S2)	1
MP308	21145051	BZ780975	HEATSINK	1
MP310	2953308A	BZ780581	SCREW,3X8MM	1
MS600	100008500	BZ680073	MS-STATOR,ASS'Y	1
N200	26031000	BZ684416	GROUND CORD ##	1
N600	196313090	BZ684456	QS-CONN-IL02 ##	1
P200	1981334GA	BZ684445	POST-00-6232-010-006-8	1
P400	1981335G7	BZ684415	POST-006216-007-000808	1
P401	1981340A2	BZ684447	POST-TMC-A02X-A1	1
P700	1981322AA	BZ684412	POST-TKC-G10P-A1	1
P800	198130722	BZ684318	POST-B2P3-VH	1
PD03	2656235	BZ684309	CONNECTOR (3208)	1
PI701, PI702	145400300	BZ480087	PHOTOINTERRUPTER,GP1S566	2
PQ701, PQ702	145100100	BZ480085	PHOTOTRANSISTOR,PT493F	2

MAIN CIRCUIT BOARD (V-208CZR)

NOTE:  : Safety Materials

LOCATION NO.	REFERENCE NO.	TOSHIBA PART NO.	DESCRIPTION	Q'TY
R414	165282206	BZ280034	RI,8.2K OHM,2125,1/10W,J	-
R601, R701	165210306	BZ280004	RI,10K OHM,2125,1/10W,J	-
R605, R764	16131R004	BZ280096	RC,1 OHM,1/6W,J	2
R606, R819	165222106	BZ280015	RI,220 OHM,2125,1/10W,J	2
R607	16133R304	BZ280108	RESISTOR,CARBON,3.3OHM 1/6W	1
R700, R721	161310304	BZ280188	RESISTOR,CARBON,10KOHM 1/6W	6
R702, R777	165215306	BZ280011	RI,15K OHM,2125,1/10W,J	3
R704, R705	165247306	BZ280027	RI,47K OHM,2125,1/10W,J	5
R706, R707	165247306	BZ280027	RI,47K OHM,2125,1/10W,J	-
R709, R719	165210206	BZ280003	RI,1K OHM,2125,1/10W,J	-
R710, R711	165247206	BZ280026	RI,4.7K OHM,2125,1/10W,J	-
R712, R713	165247206	BZ280026	RI,4.7K OHM,2125,1/10W,J	-
R714, R715	165247206	BZ280026	RI,4.7K OHM,2125,1/10W,J	-
R718, R760	165222206	BZ280016	RI,2.2K OHM,2125,1/10W,J	-
R723, R724	165247206	BZ280026	RI,4.7K OHM,2125,1/10W,J	-
R725, R726	161347204	BZ280097	RC,4.7K OHM,1/6W,J	2
R727	165247306	BZ280027	RI,47K OHM,2125,1/10W,J	-
R735, R746	165247206	BZ280026	RI,4.7K OHM,2125,1/10W,J	-
R738, R739	165212306	BZ280008	RI,12K OHM,2125,1/10W,J	-
R740, R741	161315104	BZ280163	RESISTOR,CARBON,150OHM 1/6W	2
R742, R745	161310304	BZ280188	RESISTOR,CARBON,10KOHM 1/6W	-
R747, RC08	165210106	BZ280002	RI,100 OHM,2125,1/10W,J	2
R750, R751	165210306	BZ280004	RI,10K OHM,2125,1/10W,J	-
R752, R753	165256306	BZ280083	RI,56K OHM,2125,1/10W,J	2
R754, R755	165210306	BZ280004	RI,10K OHM,2125,1/10W,J	-
R759, R816	165247106	BZ280025	RI,470 OHM,2125,1/10W,J	-
R761	165218206	BZ280013	RI,1.8K OHM,2125,1/10W,J	-
R762, R763	165210306	BZ280004	RI,10K OHM,2125,1/10W,J	-
R765, R766	165200006	BZ280035	RI,0 OHM,2125,1/10W,J	-
R769	165210606	BZ280189	RESISTOR,CHIP,10MOHM 10W	1
R770, R782	165210206	BZ280003	RI,1K OHM,2125,1/10W,J	-
R773, RC02	165222206	BZ280016	RI,2.2K OHM,2125,1/10W,J	-
R774	165233206	BZ280022	RI,3.3K OHM,2125,1/10W,J	-
R775, R827	165247206	BZ280026	RI,4.7K OHM,2125,1/10W,J	-
R776, RC04	165268206	BZ280032	RI,6.8K,2125,1/10W,J	2
R779, R780	165210406	BZ280005	RI,100K OHM,2125,1/10W,J	-
R781	165210506	BZ280006	RI,1M OHM,2125,1/10W,J	1
R786, R787	165210306	BZ280004	RI,10K OHM,2125,1/10W,J	-
R788, R793	165210306	BZ280004	RI,10K OHM,2125,1/10W,J	-
R790, R791	165210206	BZ280003	RI,1K OHM,2125,1/10W,J	-
R792, R820	165210206	BZ280003	RI,1K OHM,2125,1/10W,J	-
R794, R795	165210306	BZ280004	RI,10K OHM,2125,1/10W,J	-
R796, R798	165210306	BZ280004	RI,10K OHM,2125,1/10W,J	-
R797, R799	161310304	BZ280188	RESISTOR,CARBON,10KOHM 1/6W	-
R7A0, R812	165239206	BZ280040	RI,3.9K OHM,2125,1/10W,J	-
R7A1	161356204	BZ280192	RESISTOR,CARBON,5.6KOHM 1/6W	1
 R7A4, RA01	165256206	BZ280029	RI,5.6K OHM,2125,1/10W,J	-
 R800	16C34R71A	BZ280127	RESISTOR4.7OHM 3W	1
R801, R802	161382304	BZ280123	RESISTOR,CARBON,82KOHM 1/6W	4
R803, R804	161382304	BZ280123	RESISTOR,CARBON,82KOHM 1/6W	-
R805, R806	161368304	BZ280120	RESISTOR,CARBON,68KOHM 1/6W	4
R807, R808	161368304	BZ280120	RESISTOR,CARBON,68KOHM 1/6W	-
R809, R810	161382104	BZ280122	RESISTOR,CARBON,820OHM 1/6W	2

MAIN CIRCUIT BOARD (V-208CZR)

NOTE: ⚠ : Safety Materials

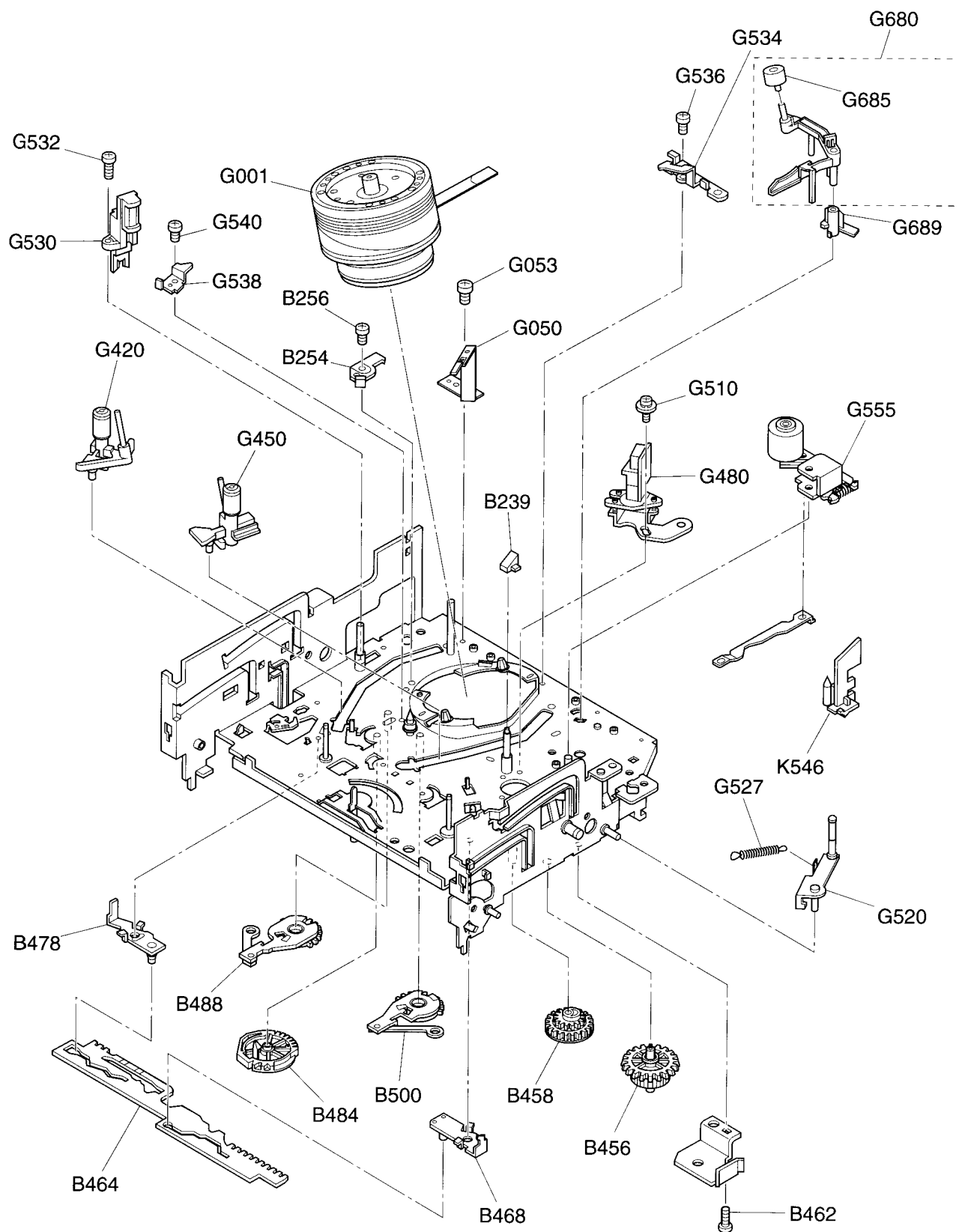
LOCATION NO.	REFERENCE NO.	TOSHIBA PART NO.	DESCRIPTION	Q'TY
Q201, Q202	123241213	BZ580009	TRANSISTOR,2SC2412K-Q,R	6
Q203, Q401	123241213	BZ580009	TRANSISTOR,2SC2412K-Q,R	-
Q270, QC01	121103713	BZ580041	TRANSISTOR,2SA1037KT-Q,R	2
Q402, QD03	123241213	BZ580009	TRANSISTOR,2SC2412K-Q,R	-
Q403	120008303	BZ580051	TRANSISTOR,RN2403T	1
Q404, Q405	124073421	BZ580053	TRANSISTOR,2SD734T-F	2
⚠ Q800	123451700	BZ580029	TRANSISTOR,2SC4517	1
⚠ Q801	124213201	BZ580028	TRANSISTOR,2SD2132T-V,W	1
Q802, Q805	123245811	BZ580012	TRANSISTOR,2SC2458-Y,GR	2
Q803, Q804	124158101	BZ580027	TRANSISTOR,2SD1581T-L,M	2
Q807	121102031	BZ580048	TRANSISTOR,2SA1020T-O,Y	1
Q808	120010501	BZ580044	TRANSISTOR,KRC102MT	1
R200, R757	165233106	BZ280041	RI,330 OHM,2125,1/10W,J	2
R201, R830	165218306	BZ280014	RI,18K OHM,2125,1/10W,J	2
R202	165239306	BZ280043	RI,39K OHM,2125,1/10W,J	1
R203, R778	165210406	BZ280005	RI,100K OHM,2125,1/10W,J	7
R204, R210	165200006	BZ280035	RI,0 OHM,2125,1/10W,J	-
R205, R223	165247106	BZ280025	RI,470 OHM,2125,1/10W,J	4
R206, R207	165222206	BZ280016	RI,2.2K OHM,2125,1/10W,J	13
R208, R215	165222206	BZ280016	RI,2.2K OHM,2125,1/10W,J	-
R209, R717	165256206	BZ280029	RI,5.6K OHM,2125,1/10W,J	4
R211	165212406	BZ280009	RI,120K OHM,2125,1/10W,J	1
R212	165239106	BZ280038	RI,390 OHM,2125,1/10W,J	1
R213, R821	165282106	BZ280045	RI,820 OHM,2125,1/10W,J	2
R214, R216	165215206	BZ280010	RI,1.5K OHM,2125,1/10W,J	4
R217, R234	165247206	BZ280026	RI,4.7K OHM,2125,1/10W,J	15
R218, R270	165256106	BZ280039	RI,560 OHM,2125,1/10W,J	2
R222	165268306	BZ280049	RI,68K OHM,2125,1/10W,J	1
R224, R771	165212206	BZ280007	RI,1.2K OHM,2125,1/10W,J	3
R225, R226	165282206	BZ280034	RI,8.2K OHM,2125,1/10W,J	3
R229, R402	165210206	BZ280003	RI,1K OHM,2125,1/10W,J	18
R231	165251306	BZ280142	RESISTOR,CHIP,51.0KOHM 1/10W	1
R233, R401	165212306	BZ280008	RI,12K OHM,2125,1/10W,J	7
R235, R244	165222206	BZ280016	RI,2.2K OHM,2125,1/10W,J	-
R236, R238	165227306	BZ280048	RI,27K OHM,2125,1/10W,J	4
R237	165222506	BZ280190	RESISTOR,CHIP,2.2MOHM 1/10W	1
R239, R242	165233206	BZ280022	RI,3.3K OHM,2125,1/10W,J	3
R240, R245	165239206	BZ280040	RI,3.9K OHM,2125,1/10W,J	5
R243, R772	165227206	BZ280020	RI,2.7K OHM,2125,1/10W,J	3
R246, R600	165210306	BZ280004	RI,10K OHM,2125,1/10W,J	19
R247, R416	165200006	BZ280035	RI,0 OHM,2125,1/10W,J	-
R250, R756	165218206	BZ280013	RI,1.8K OHM,2125,1/10W,J	3
R351, R716	165222206	BZ280016	RI,2.2K OHM,2125,1/10W,J	-
R352, R736	165222306	BZ280017	RI,22K OHM,2125,1/10W,J	3
R353	165233306	BZ280023	RI,33K OHM,2125,1/10W,J	1
R403, R407	165210206	BZ280003	RI,1K OHM,2125,1/10W,J	-
R406	165247006	BZ280050	RI,47 OHM,2125,1/10W,J	1
R408	16521R006	BZ280172	RESISTOR,CHIP,1OHM 1/10W	1
R409, RC03	165215206	BZ280010	RI,1.5K OHM,2125,1/10W,J	-
R410, R737	165227306	BZ280048	RI,27K OHM,2125,1/10W,J	-
R411, R758	165233406	BZ280024	RI,330K OHM,2125,1/10W,J	2
R412	165220106	BZ280182	RESISTOR,CHIP,200OHM 1/10W	1
R413, R415	165212306	BZ280008	RI,12K OHM,2125,1/10W,J	-

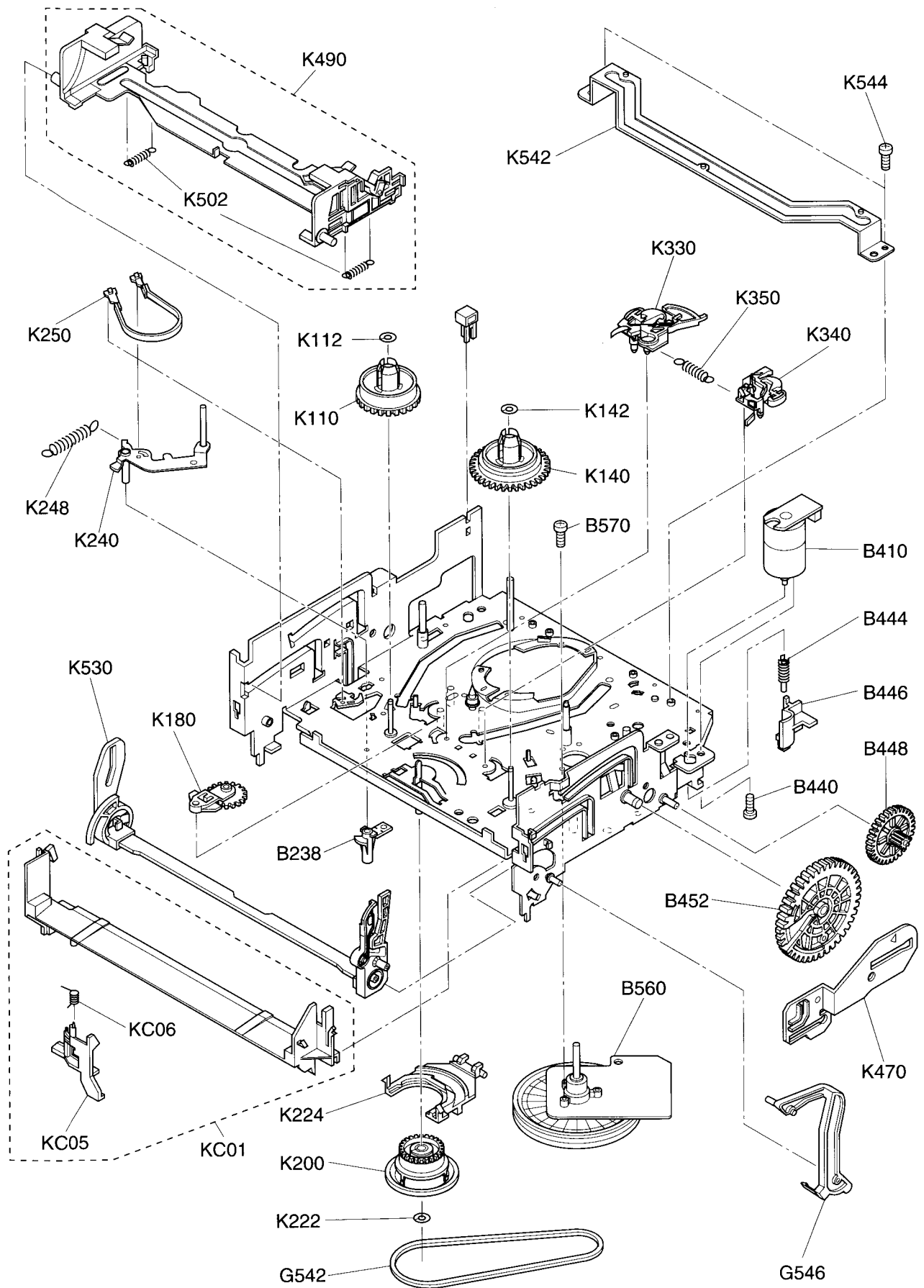
MAIN CIRCUIT BOARD (V-208CZR)

NOTE: ⚠ : Safety Materials

LOCATION NO.	REFERENCE NO.	TOSHIBA PART NO.	DESCRIPTION	Q'TY
R811	16411210A	BZ280125	RESISTOR,OXIDE METAL FILM,120OHM 1W	1
R813	16311R20A	BZ280124	RESISTOR,METAL FILM,1.2OHM 1/2W	1
R814	16D28231A	BZ280191	RESISTOR82KOHM 2W	1
R815	165227206	BZ280020	RI,2.7K OHM,2125,1/10W,J	-
R817, R818	161315204	BZ280094	RC,1.5K OHM,1/6W,J	2
R822	165C30206	BZ280104	RESISTOR,CHIP,3KOHM 1/10W	1
R823	165C20206	BZ280106	RESISTOR,CHIP,2KOHM 1/10W	1
R824	165215106	BZ280046	RI,150 OHM,2125,1/10W,J	1
R826, R829	161C75108	BZ280196	RESISTOR,CARBON,750OHM 1/2W	2
R828	16136R804	BZ280121	RESISTOR,CARBON,6.8OHM 1/6W	1
R832	165239206	BZ280040	RI,3.9K OHM,2125,1/10W,J	-
R833	165247206	BZ280026	RI,4.7K OHM,2125,1/10W,J	-
R839	165210006	BZ280001	RI,10 OHM,2125,1/10W,J	1
R840	165215306	BZ280011	RI,15K OHM,2125,1/10W,J	-
R841, R845	165210206	BZ280003	RI,1K OHM,2125,1/10W,J	-
R842	165210306	BZ280004	RI,10K OHM,2125,1/10W,J	-
R844	161310204	BZ280187	RESISTOR,CARBON,1KOHM 1/6W	1
R850, RD03	165200006	BZ280035	RI,0 OHM,2125,1/10W,J	-
R851, RC05	165210206	BZ280003	RI,1K OHM,2125,1/10W,J	-
RA02	165212206	BZ280007	RI,1.2K OHM,2125,1/10W,J	-
RA03	165212306	BZ280008	RI,12K OHM,2125,1/10W,J	-
RA04, RA05	165210406	BZ280005	RI,100K OHM,2125,1/10W,J	-
RA08	165222306	BZ280017	RI,22K OHM,2125,1/10W,J	-
RC01, RC06	161347104	BZ280112	RESISTOR,CARBON,470OHM 1/6W	2
RC09, RD06	165210206	BZ280003	RI,1K OHM,2125,1/10W,J	-
RD07	165222206	BZ280016	RI,2.2K OHM,2125,1/10W,J	-
RD08	165210406	BZ280005	RI,100K OHM,2125,1/10W,J	-
RD13, RD14	165275006	BZ280033	RI,75 OHM,2125,1/10W,J	2
RD22	161356104	BZ280169	RESISTOR,CARBON,560OHM 1/6W	1
RD92	165200006	BZ280035	RI,0 OHM,2125,1/10W,J	-
SW700	23H10150	BZ682015	SWITCH MMS00370ZMB0	1
SW701, SW702	23A11660	BZ682016	SWITCH SKHVBD-RT	9
SW703, SW704	23A11660	BZ682016	SWITCH SKHVBD-RT	-
SW705, SW706	23A11660	BZ682016	SWITCH SKHVBD-RT	-
SW707, SW708	23A11660	BZ682016	SWITCH SKHVBD-RT	-
SW709	23A11660	BZ682016	SWITCH SKHVBD-RT	-
SW710	23A11630	BZ682012	SWITCH MPU10252MLB2	1
⚠ T800	174402030	BZ683100	TRANSFORMER,SWT-SRW2929ED205V011	1
⚠ Z800	26GA022	BZ684319	MINI FUSE T1.6A250V	1

6. CASSETTE DECK ASSEMBLY





DECK MECHANISM ASS'Y

* 2 HEAD 1 SPEED MODEL : V-208F * 2 HEAD 2 SPEED MODEL : V-208B, V-208CZR, V-208EG * PAL 4HEAD 2 SPEED MODEL: V-408EG * SECAM 4 HEAD 2 SPEED MODEL : V-408F

LOCATION NO.	TOSHIBA PART NO.	DESCRIPTION	Q'TY
B238	70379824	SLEEVE, TENTIN	1
B239	70368283	CAP, #8 GUIDE	1
B254	70373470	PLATE, CYLINDER C	1
B256	70391907	SCREW, PTTS 2.6*5 SZN	6
B410	70322542	MOTOR, LOADING ASS'Y	1
B440	70391345	SCREW PP 3*3 SZN	1
B444	70333498	GEAR, WORM	1
B446	70361687	HOLDER, WORM	1
B448	70333497	GEAR, WORM WHEEL	1
B452	70333496	GEAR, FL.CAM	1
B456	70368279	GEAR, JOINT 1	1
B458	70368278	GEAR, JOINT 2	1
B462	70391907	SCREW, PTTS 2.6*5 SZN	—
B464	70376041	SLIDER, CAM	1
B468	70326752	LEVER, PINCH DRIVE ASS'Y	1
B478	70326751	LEVER, TENTION DRIVE ASS'Y	1
B484	70333499	GEAR, LOADING DRIVE	1
B488	70322540	LEVER, S.LOADING ASS'Y	1
B500	70322541	LEVER, T.LOADING ASS'Y	1
B560	70125755	MOTOR, CAPSTAN ASS'Y	1
B570	70391024	SCREW, PTTB 2.6*6 SZN	1
*G001	70311921	CYLINDER ASS'Y FOR 2HEAD 1 SPEED MODEL	1
*G001	70311939	CYLINDER ASS'Y FOR 2HEAD 2 SPEED MODEL	1
*G001	70311920	CYLINDER ASS'Y FOR PAL 4HEAD 2SPEED MODEL	1
*G001	70311941	CYLINDER ASS'Y FOR SECAM 4HEAD 2 SPEED MODEL	1
G050	70325873	GROUND, BRUSH ASS'Y(NEW-V)	1
G053	70391907	SCREW, PTTS 2.6*5 SZN	—
G420	70322536	SLIDER, SUPPLY ASS'Y	1
G450	70322537	SLIDER, TAKE UP ASS'Y	1
G480	70318793	HEAD, ACE.ASS'Y	1
G510	70391936	SCREW, PTTS 2.6*5.6+SW+2W	1
G520	70326745	LEVER, #9 GUIDE ASS'Y	1
G527	70356416	SPRING, #9 GUIDE	1
G530	70183029	HEAD, FULL ERASE	1
G532	70391910	SCREW, PTTS 2.6*8 SZN	1
G534	70373461	PLATE, CYLINDER A	1
G536	70391907	SCREW, PTTS 2.6*5 SZN	—
G538	70373462	PLATE, CYLINDER B	1
G540	70391907	SCREW, PTTS 2.6*5 SZN	—
G542	70342117	BELT, PULLEY	1
G546	70363491	LEVER, FL.DOOR	1
G555	70326756	PINCH, ASS'Y	1
G680	70326754	LEVER, HEAD CLEANER ASS'Y	1
G685	70326715	ROLL CLEANER, SUB ASS'Y	1
G689	70379835	SLEEVE, HEAD CLEANER	1
K110	70331600	DISK, S REEL	1
K112	70396191	LUMIRROR 2.1*5*0.5(RED)	3
K140	70331601	DISK, T REEL	1
K142	70396191	LUMIRROR 2.1*5*0.5(RED)	—
K180	70316107	LEVER, IDLE.ASS'Y	1
K200	70316106	GEAR, CLUTCH, ASS'Y	1
K222	70396191	LUMIRROR 2.1*5*0.5(RED)	—
K224	70363493	LEVER, UP DOWN	1

DECK MECHANISM ASS'Y

LOCATION NO.	TOSHIBA PART NO.	DESCRIPTION	Q'TY
K248	70356415	SPRING, TENTION LEVER	1
K250	70326753	BAND, BRAKE ASS'Y	1
K330	70326749	LEVER, S.BRAKE ASS'Y	1
K340	70326760	LEVER, T.BRAKE ASS'Y	1
K350	70356402	SPRING, MAIN BRAKE	1
K470	70376042	SLIDER, FL.DRIVE	1
K490	70324902	HOLDER, FL.CASSETTE ASS'Y	1
K502	70356394	SPRING, FL.LEVER-LR	1
K530	70324903	LEVER, FL.ARM ASS'Y	1
K542	70372089	BRACKET, FL.TOP	1
K544	70391907	SCREW, PTTS 2.6*5 SZN	-
K546	70361688	GUIDE, FL.CASSETTE, DOOR	1
KC01	70324906	GUIDE, FL.CASSETTE ASS'Y(VCP)	1
KC05	70363492	LEVER, REC.INHIBIT	1
KC06	70356404	SPRING, REC.INHIBIT	1

TABLE OF IC PIN VOLTAGE

CONDITION

MODE

STOP : RECIVING CH2 ANTENNA DISCONNECTED,BLUE BACK ON THE TV SCREEN
 PLAY : TEST TEPE ST-C6
 REC : AUX AUDIO IN-1kHz 300mV(LEADER LAG-120G)
 : AUX VIDEO IN-PHILLIPS PM5518-TX-VPS,COLOR BAR

INSTRUMENT

DEGITAL MALTIMETER : HEWLETT 34401A
 INPUT RESISTANCE : 10MΩ

TABLE 1 IC201 LA71521M

MODE PIN No.	STOP	PLAY	REC
1	2.38	2.39	2.41
2	0	0	0
3	2.07	2.40	2.41
4	0	0.3	0
5	5.08	5.10	1.45
6	0.01	0.02	0.7
7	2.39	2.39	2.41
8	2.39	2.39	2.49
9	2.37	2.37	2.36
10	2.37	2.37	2.36
11	2.40	2.40	3.12
12	2.34	2.34	2.34
13	1.68	1.54	1.79
14	2.68	0	2.67
15	4.21	3.21	4.20
16	1.57	1.58	1.56
17	2.43	2.45	2.43
18	1.91	1.97	1.92
19	0.04	0.04	4.15
20	4.34	2.43	4.32
21	0	0	0
22	1.60	1.60	1.51
23	0.05	2.45	0.05
24	2.36	0	2.42
25	1.75	1.84	1.81
26	3.01	3.07	3.09
27	0	0	0
28	1.35	0.50	1.73
29	2.31	2.55	2.42
30	2.19	0.84	2.21
31	4.10	4.12	4.11
32	0	0	0
33	0.07	0.07	0.07
34	2.40	2.24	1.78
35	3.00	2.98	3.00
36	4.85	4.81	4.84
37	1.35	0.61	0.61
38	1.63	1.96	1.78
39	2.84	3.13	3.11
40	3.09	3.05	3.04

MODE PIN No.	STOP	PLAY	REC
41	5.02	5.02	5.00
42	1.94	1.98	1.98
43	0.03	0.03	0.03
44	1.60	1.61	1.60
45	1.78	1.86	1.77
46	0	2.00	0
47	4.98	4.95	4.96
48	2.79	2.79	2.80
49	4.93	3.96	3.95
50	2.85	2.82	2.86
51	4.92	3.97	3.96
52	3.17	3.15	3.15
53	0.02	0.02	0.02
54	2.13	2.11	2.13
55	3.97	3.87	3.95
56	2.50	2.42	2.54
57	0	0	0
58	1.40	2.76	1.40
59	1.50	1.51	1.50
60	1.23	0.92	0.85
61	3.02	1.98	1.97
62	4.46	0	0
63	3.66	3.66	3.66
64	3.66	4.12	4.12
65	1.51	1.52	1.51
66	0.03	0.23	0.41
67	0.03	0.23	0.41
68	4.92	4.96	4.89
69	1.56	1.56	1.56
70	5.03	0	0
71	2.40	2.40	2.40
72	0.02	0.02	0
73	2.40	2.40	2.40
74	2.40	2.40	2.40
75	2.40	2.40	2.40
76	5.12	5.13	5.10
77	2.41	2.42	2.39
78	0.01	0	0
79	2.39	2.40	2.40
80	5.10	0.18	4.76

TABLE 2 IC203 LC89977M

MODE PIN No.	STOP	PLAY	REC
1	2.64	2.64	2.63
2	4.97	4.98	4.97
3	2.64	2.64	2.64
4	0	0	0
5	2.46	2.35	2.34
6	0	0	0
7	1.69	1.54	1.54

MODE PIN No.	STOP	PLAY	REC
8	9.12	9.12	9.07
9	2.11	2.11	2.11
10	0.93	0.93	0.93
11	0.01	0.01	0.01
12	0.03	0.03	0.03
13	1.83	1.84	1.82
14	0	0	0

TABLE 3 IC601 TB6515AP

MODE PIN No.	STOP	PLAY	REC
1	0.11	0.22	1.06
2	1.49	1.51	1.51
3	0	0	0
4	0	0	0
5	13.6	13.31	13.50
6	0.01	0.07	0.06
7	13.5	9.94	10.18
8	13.5	9.79	10.19

MODE PIN No.	STOP	PLAY	REC
9	13.5	9.98	10.19
10	0.01	0.07	0.06
11	0.01	2.76	2.76
12	0	0	0
13	5.02	5.17	5.17
14	3.31	3.40	3.40
15	0.68	0.71	0.71
16	0.86	0.85	0.84

TABLE 4 ICC01 LC74763-9708

MODE PIN No.	STOP	PLAY	REC
1	0	0	0
2	0	0	0
3	5.06	5.07	5.05
4	0.39	0.40	0.40
5	2.58	2.58	2.47
6	2.58	2.58	2.51
7	0.02	0.02	0.02
8	4.23	4.50	4.50
9	0.28	3.30	3.60
10	4.90	5.04	5.00
11	0	0	0
12	0	0	0
13	0	0	0
14	0	0	0
15	5.06	5.07	5.05

MODE PIN No.	STOP	PLAY	REC
16	1.67	1.91	1.91
17	5.09	5.75	5.50
18	1.66	1.91	1.83
19	1.10	1.60	1.30
20	2.17	2.73	2.80
21	2.02	2.03	2.01
22	0	0	0
23	2.60	2.69	2.68
24	2.60	2.69	2.68
25	2.93	3.35	3.34
26	2.89	3.35	3.35
27	2.60	2.60	2.59
28	2.60	2.60	2.59
29	1.00	0.67	0.07
30	5.08	5.07	5.05

TABLE 5 IC750 LA7116

MODE PIN No.	STOP	PLAY	REC
1	4.55	3.10	3.10
2	2.48	2.52	2.52
3	2.52	2.51	3.10
4	2.49	2.52	2.61
5	2.51	2.52	2.73
6	0	0	0
7	0	0	0
8	0	0	0
9	0	0	0
10	2.53	2.55	2.54
11	2.56	2.55	2.52
12	2.56	2.55	2.53

MODE PIN No.	STOP	PLAY	REC
13	5.11	5.11	5.08
14	0.38	0.39	0.38
15	0.85	0.85	0.84
16	2.53	2.53	2.53
17	2.53	2.53	2.53
18	4.55	2.39	2.38
19	5.11	5.11	5.08
20	2.52	2.52	2.52
21	2.52	2.52	2.52
22	2.52	2.52	2.53
23	4.55	2.36	2.35
24	2.54	2.54	2.53

TABLE6 IC701 M37779MA5

MODE PIN No.	STOP	PLAY	REC
1	5.10	0	0
2	2.54	2.54	2.53
3	0	2.80	2.80
4	0	2.72	2.70
5	5.11	0 - 5.11	0 - 5.11
6	5.11	0 - 5.11	0 - 5.11
7	0.47	2.38	2.38
8	0.02	0.02	0.02
9	0.02	0.02	0.02
10	0.07	0.07	0.07
11	5.10	5.09	5.07
12	0.02	3.03	3.01
13	0.02	0.02	0.02
14	0.02	0.03	0.26
15	0.02	5.13	5.10
16	0.02	0.03	0.20
17	0	0	0
18	0.02	0.02	0.02
19	0.80	0.44	0.31
20	0.02	0.02	0.02
21	0.02	0.02	0.02
22	4.56	2.36	2.35
23	0	0	5.08
24	0.11	1.04	1.15
25	0.40	3.10	3.10
26	5.14	5.14	5.11
27	5.10	5.11	5.08
28	0.01	0.01	0.02
29	0.01	0.01	0.02
30	0.06	0.06	0.06
31	0.06	0.06	0.06
32	5.10	5.08	5.08
33	0.74	4.91	4.89
34	0.74	4.94	4.90
35	0	0	0
36	0	0	0
37	5.14	5.13	5.10
38	2.38	2.34	2.34
39	2.33	2.35	2.32
40	5.10	5.11	5.08
41	0	0	0
42	1.50	1.50	1.50
43	1.50	1.50	1.50
44	0.02	0.02	0.02
45	0	0	0
46	0	5.13	0
47	0	0	0
48	0.02	0.02	0.02
49	0	0	0
50	5.11	5.11	5.08

MODE PIN No.	STOP	PLAY	REC
51	-27.8	-27.6	-27.9
52	-27.8	-27.6	-27.9
53	-27.8	-27.6	-27.9
54	-27.8	-27.6	-27.9
55	-27.8	-27.6	-27.9
56	-27.8	-27.6	-27.9
57	-27.8	-27.6	-27.9
58	-23.6	-23.4	-23.67
59	-23.5	-23.3	-23.60
60	-23.5	-23.3	-23.60
61	-23.5	-23.3	-23.6
62	-23.5	-23.3	-23.57
63	-23.5	-23.3	-23.57
64	-23.5	-27.6	-23.57
65	-27.8	-27.6	-27.95
66	-27.8	-22.8	-27.97
67	-23.1	-22.8	-23.15
68	-27.8	-27.6	-27.96
69	-27.8	-2.39	-27.96
70	-27.8	-3.24	-27.96
71	-27.8	-3.24	-27.96
72	-23.1	-18.00	-18.63
73	-24.5	-13.3	-24.54
74	-23.1	-22.8	-23.17
75	-28.1	-27.8	-28.21
76	5.15	5.14	5.11
77	0.28	3.50	3.50
78	0.02	0.02	0.02
79	4.90	5.04	5.04
80	4.23	4.50	4.50
81	5.15	5.14	5.11
82	5.12	5.11	5.08
83	1.10	1.10	1.10
84	5.09	5.09	5.06
85	0	0	0
86	0	5.11	5.08
87	5.10	0	0
88	0.01	0	0
89	0.19	2.16	0.03
90	2.40	2.40	2.40
91	5.11	5.11	5.08
92	0.01	0.01	0.01
93	1.40	0.63	0.61
94	3.55	3.55	3.55
95	3.55	3.55	3.55
96	5.12	5.11	5.11
97	5.12	5.11	5.11
98	0	0	0
99	5.03	0	0
100	0	514	0

TABLE 7 IC600 TA7291S

MODE PIN No.	STOP	PLAY	REC
1	0.06	0.06	0.06
2	13.61	13.33	13.51
3	0.09	0.03	0.09
4	0.09	0	0
5	0	0	0

MODE PIN No.	STOP	PLAY	REC
6	13.61	13.33	13.52
7	0.03	0	0
8	13.61	13.33	13.52
9	0.06	0.06	0.06

TABLE 8 IC702 AT24C04N.10SC

MODE PIN No.	STOP	PLAY	REC
1	0	0	0
2	0	0	0
3	0	0	0
4	0	0	0

MODE PIN No.	STOP	PLAY	REC
5	5.11	5.11	5.08
6	5.11	5.11	5.08
7	0	0	0
8	5.11	5.11	5.08

TABLE 9 IC301 TA1238N

MODE PIN No.	STOP	PLAY	REC
1	2.4	2.4	2.4
2	2.7	2.4	2.7
3	3.2	3.2	3.2
4	3.9	3.9	3.9
5	4.9	4.9	4.9
6	-	-	-
7	-	-	-
8	0	0	0
9	0.6	0.6	0.6
10	0	0	0
11	3.2	3.2	3.2
12	1.8	1.9	1.8

MODE PIN No.	STOP	PLAY	REC
13	3.3	3.3	3.3
14	0	0	0
15	1.9	1.9	1.9
16	3.2	3.2	3.2
17	4.9	4.9	4.9
18	2.6	2.7	2.6
19	1.7	1.7	1.7
20	0	0	0
21	2.6	2.6	2.6
22	2.7	2.7	2.7
23	3.2	3.2	3.2
24	2.6	2.6	2.6

TABLE10 IC350 LA7356

MODE PIN No.	STOP	PLAY	REC
1	2.9	2.9	2.9
2	5.1	5.1	5.1
3	1.6	1.6	1.6
4	0	0	0
5	0.8	0.8	0.8

MODE PIN No.	STOP	PLAY	REC
6	3.0	3.0	3.0
7	5.1	5.1	5.1
8	2.4	2.4	2.4
9	5.1	5.1	5.1
10	0.2	0.2	0.2

SPECIFICATIONS

SYSTEM

Format	: VHS standard
Recording system	: Rotary, 2-head helical scan system
Video heads	: 2-heads (V-208EG, V-208F, V-208CZR) 4-heads (V-408EG, V-408F)
Video signal system	: CCIR; 625 lines, 50 fields, PAL colour signal, NTSC colour, 525 lines
Tape speed	: SP : 23.39 mm/s (PAL) SP : 33.35 mm/s (NTSC) LP : 11.70 mm/s (PAL) SLP : 11.12 mm/s (NTSC)
Recording time	: SP : 240 minutes with E240 cassettes (PAL), LP : 480 minutes with E240 cassettes (PAL)
Winding time	: Approx. 180 seconds with E180 cassettes
Dimensions	: 371 (W) × 93 (H) × 280 (D) mm
Mass	: 3.1 kg
Operating temperature	: +5 to +40°C
Operating humidity	: Less than 80% RH
Mains power	: 230 V AC, 50 Hz
Power consumption	: 15 W (in operation)

CONNECTORS

Aerial input	: 75 Ω coaxial
Aerial output	: 75 Ω coaxial
Video input	: AUDIO/VIDEO SCART socket, 1.0 V(p-p), 75 Ω AUDIO/VIDEO RCA jack, 1.0 V(p-p), 75 Ω, unbalanced, negative sync, pin jack (V-208CZR only)
Audio input	: AUDIO/VIDEO SCART socket, 308 mV(rms), more than 10 kΩ AUDIO/VIDEO RCA jack, 308 mV(rms), more than 50 kΩ, pin jack (V-208CZR only)
Video output	: AUDIO/VIDEO SCART socket, 1.0 V(p-p), 75 Ω AUDIO/VIDEO RCA jack, 1.0 V(p-p), 75 Ω, unbalanced, negative sync, pin jack (V-208CZR only)
Audio output	: AUDIO/VIDEO SCART socket, 308 mV(rms), less than 1.0 kΩ AUDIO/VIDEO RCA jack, 308 mV(rms), less than 1.0 kΩ, pin jack (V-208CZR only)

VIDEO

Signal-to-noise ratio	: More than 43 dB (SP tape speed/PAL)
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AUDIO

Signal-to-noise ratio	: More than 36 dB (SP tape speed/PAL/normal mono)
Frequency range	: 100 Hz to 6 kHz
Audio track	: 1 track (Normal-mono)

TIMER

Clock	: 24-hour digital indication
No. of events	: 6 events 1 month

TUNER

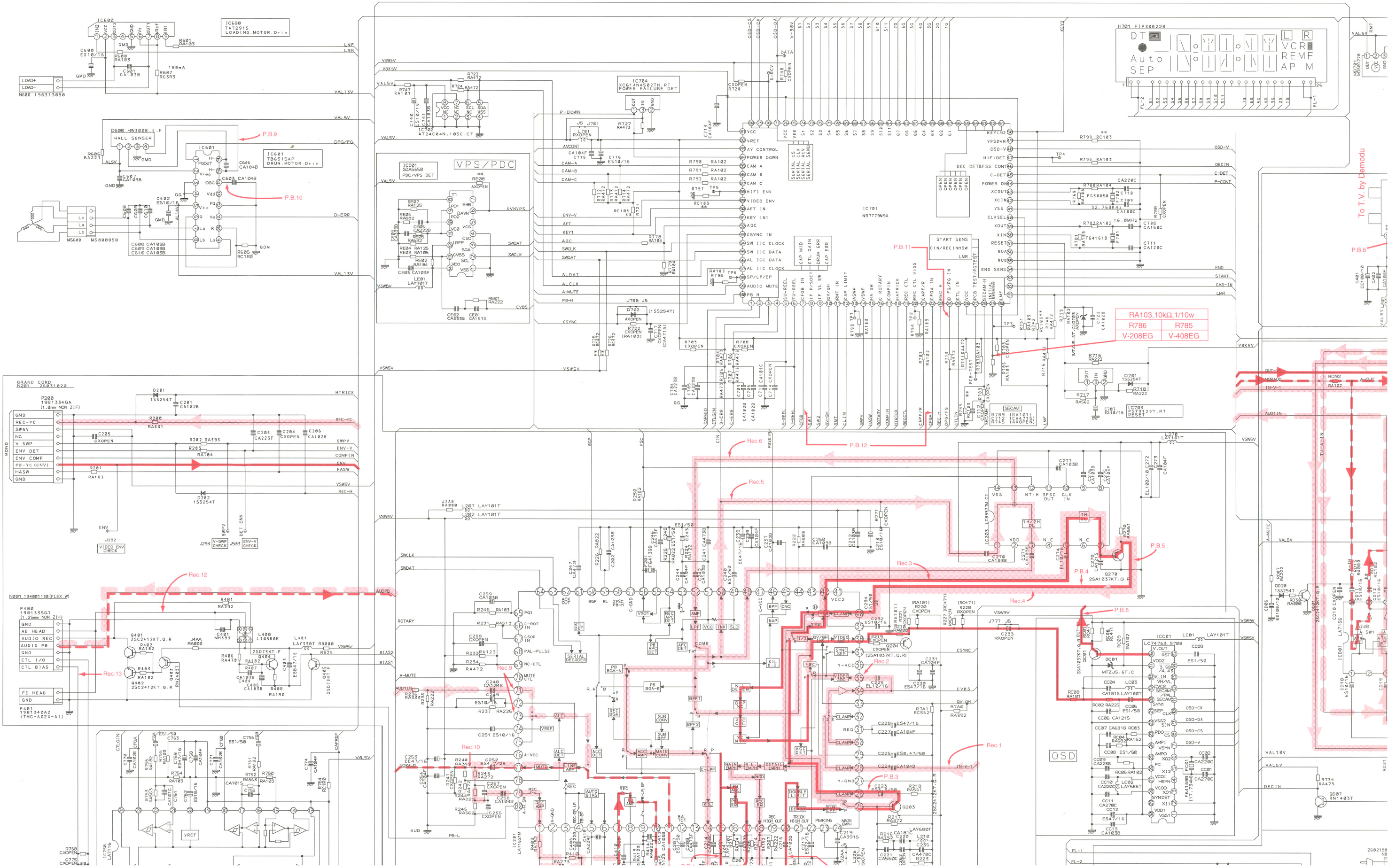
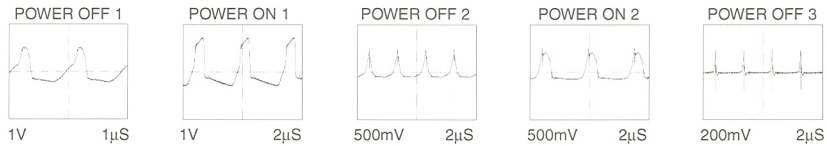
System	: Frequency synthesizer
Channel coverage	: PAL, SECAM B/G SECAM L SECAM D/K
	VHF : E2-E12, A-H UHF : E21-E69 CATV : X-Z, Z+1, Z+2, S1-S41 VHF : 2-10, F1-F6, FB-FC UHF : 21-69 CATV : B-Q, 70-92 (170-192), 1-18 (101-118) } V-208CZR only VHF : R1-R12 UHF : E21-E69 CATV : X-Z, Z+1, Z+2, S1-S41 } V-208CZR only
RF converter	: UHF channel 22-69, adjustable

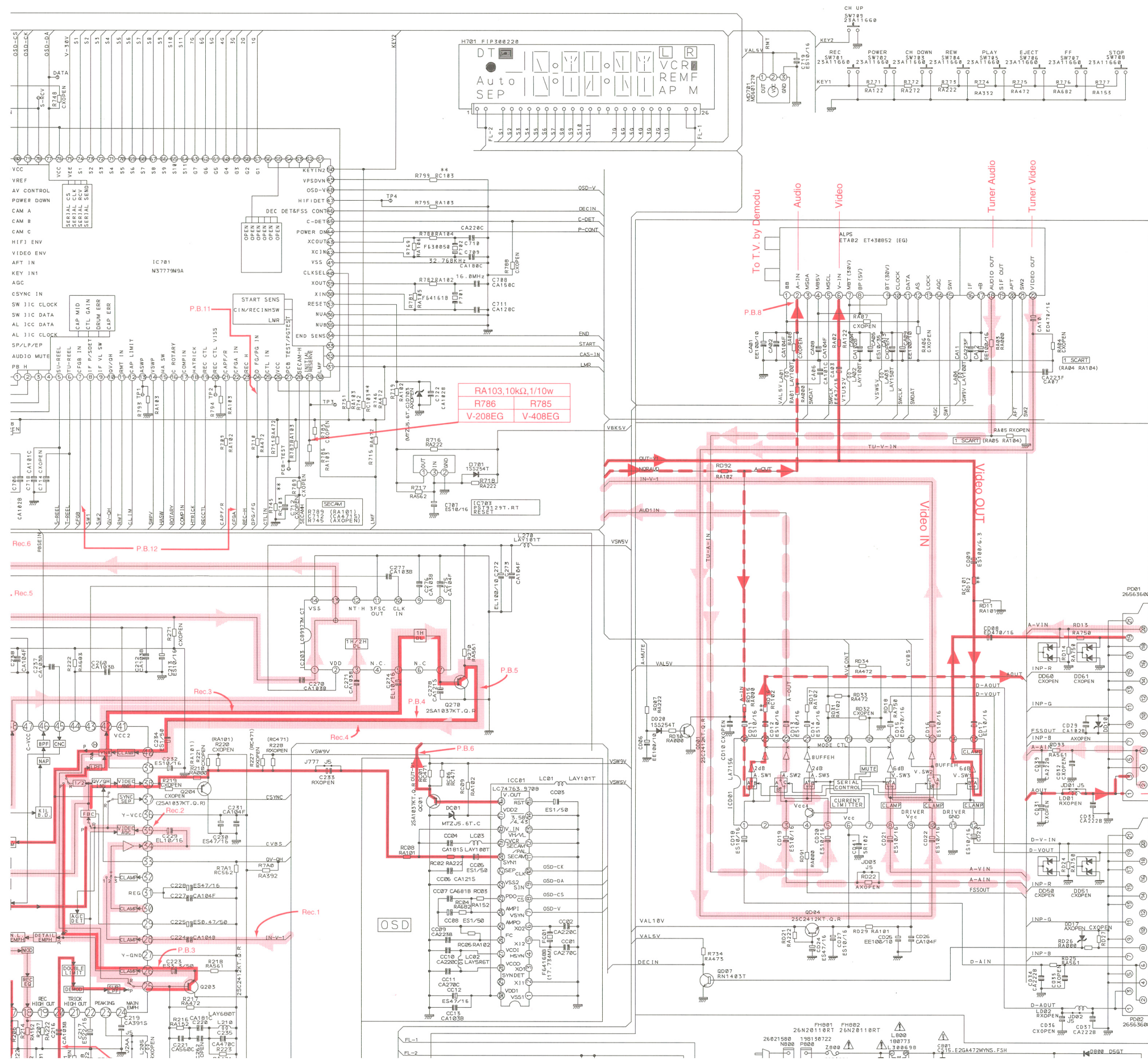
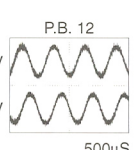
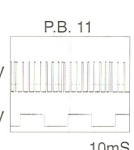
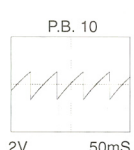
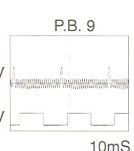
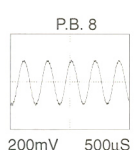
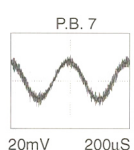
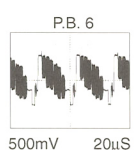
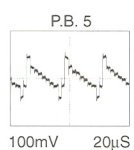
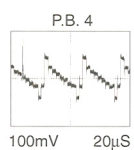
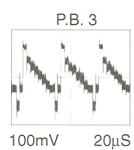
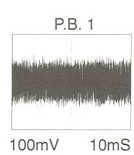
ACCESSORIES

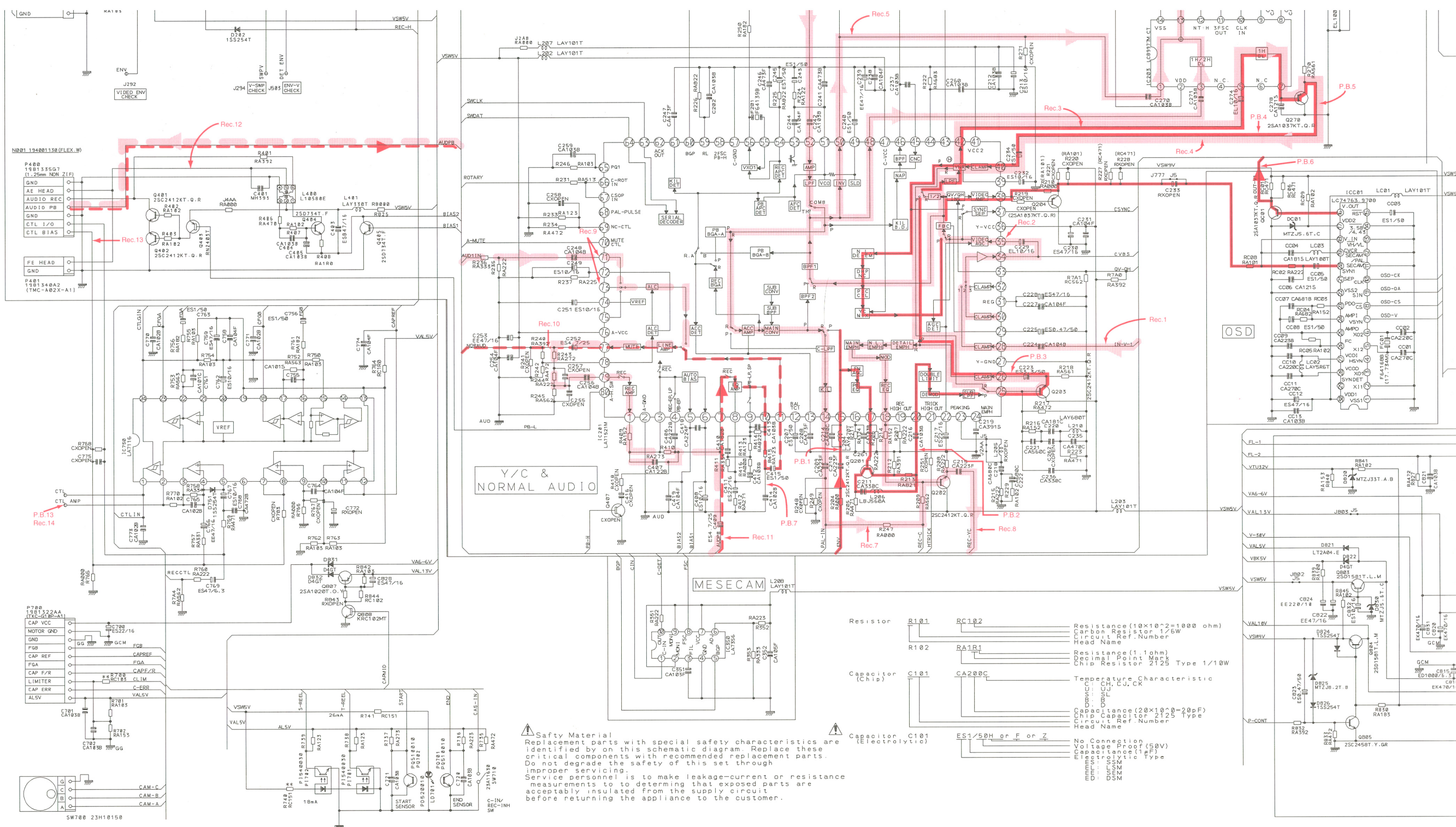
Aerial cable...1	Remote controller...1	Batteries IEC R6(AA)...2
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Designs and specifications are subject to change without notice.

SCHEMATIC DIAGRAM (V-208EG/V-408EG)





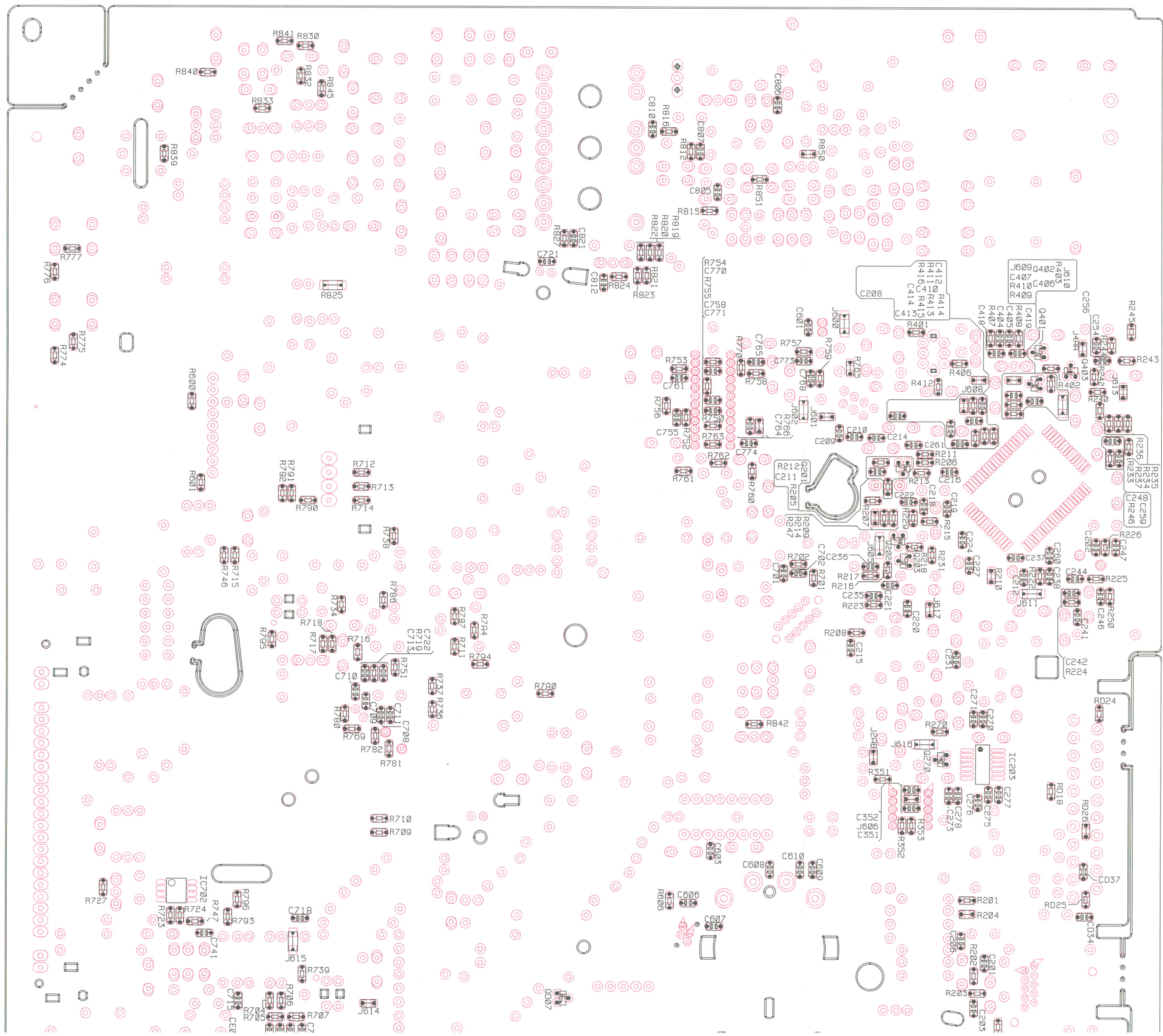


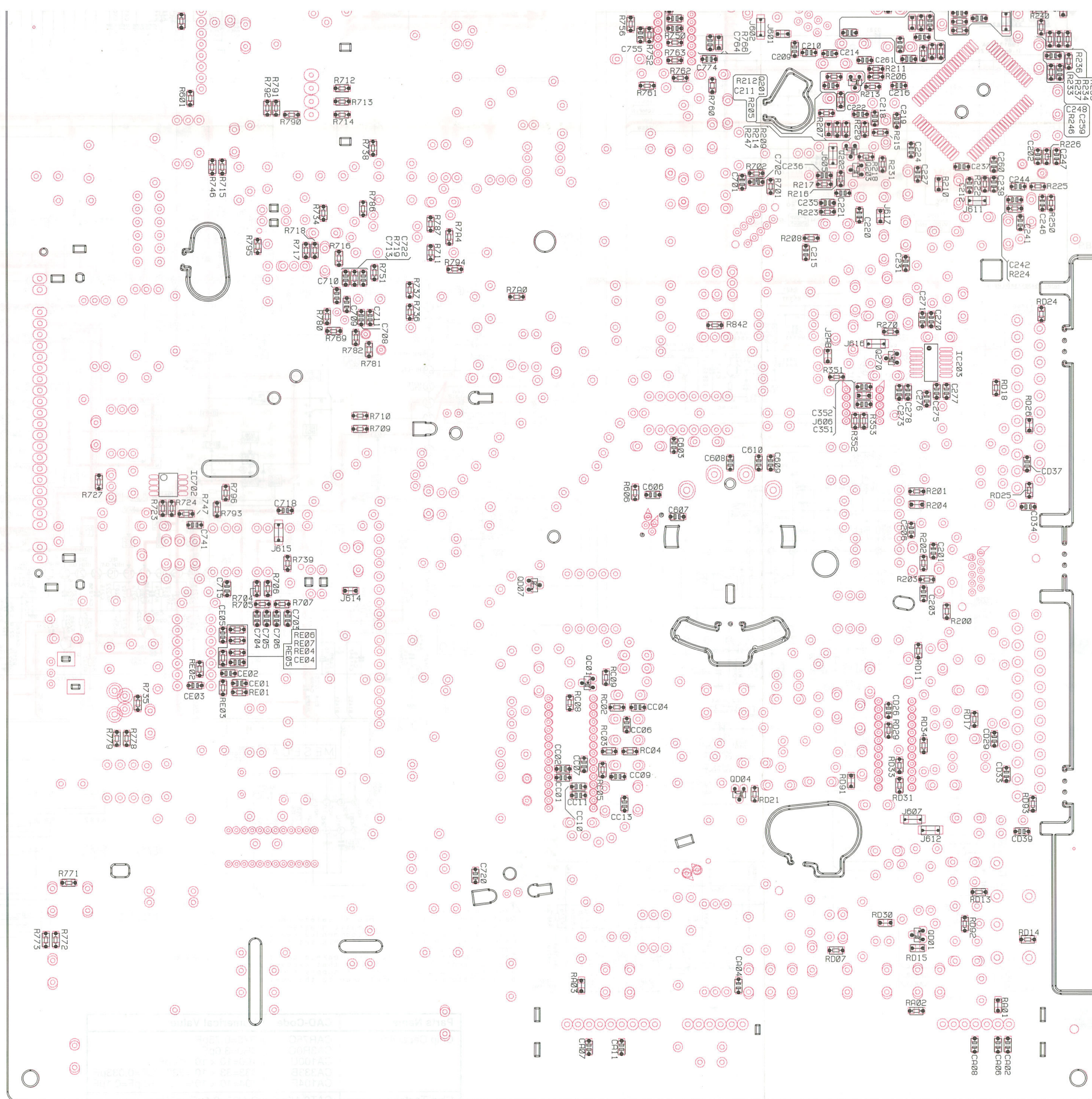
Parts Name	CAD-Code	Numerical Value
Chip Capacitor	CAR75C CA3R0C CA100U CA333B CA104F	R75=0.75pF 3R0=3.0pF 100=10 × 10 ⁰ =10pF 333=33 × 10 ³ =33000pF=0.033μF 104=10 × 10 ⁴ =0.1 × 10 ⁶ pF=0.1μF
Chip Tantalum	CAT0.1/35E	0.1/35=0.1μF / 35V
Electrolytic Capacitor	ES47/16	47/16=47μF / 16V
Chip Resistor	RBR68 RA1R0 RA180 RA821 RA102	R68=0.68 Ω 1R0=1.0Ω 180=18 × 10 ⁰ =18 Ω 821=82 × 10 ¹ =820 Ω 102=10 × 10 ² =1000 Ω=1KΩ
Coil	LAUR22T LAY2R2T LAY330T LAY151T	R22=0.22 μH 2R2=2.2 μH 330=33 × 10 ³ =33 μH 151=15 × 10 ³ =150 μH

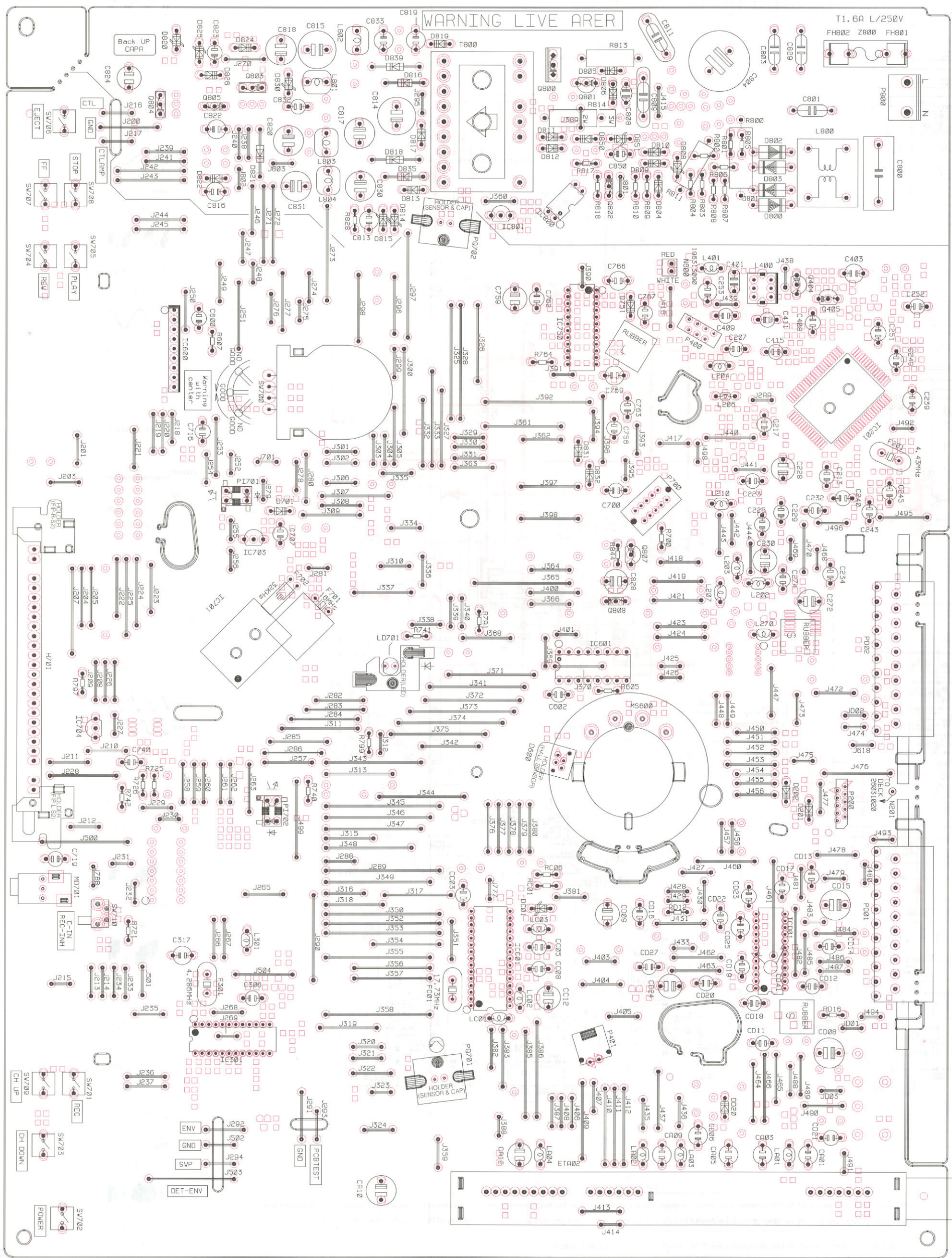
When measuring points PW of the AC power supply, from

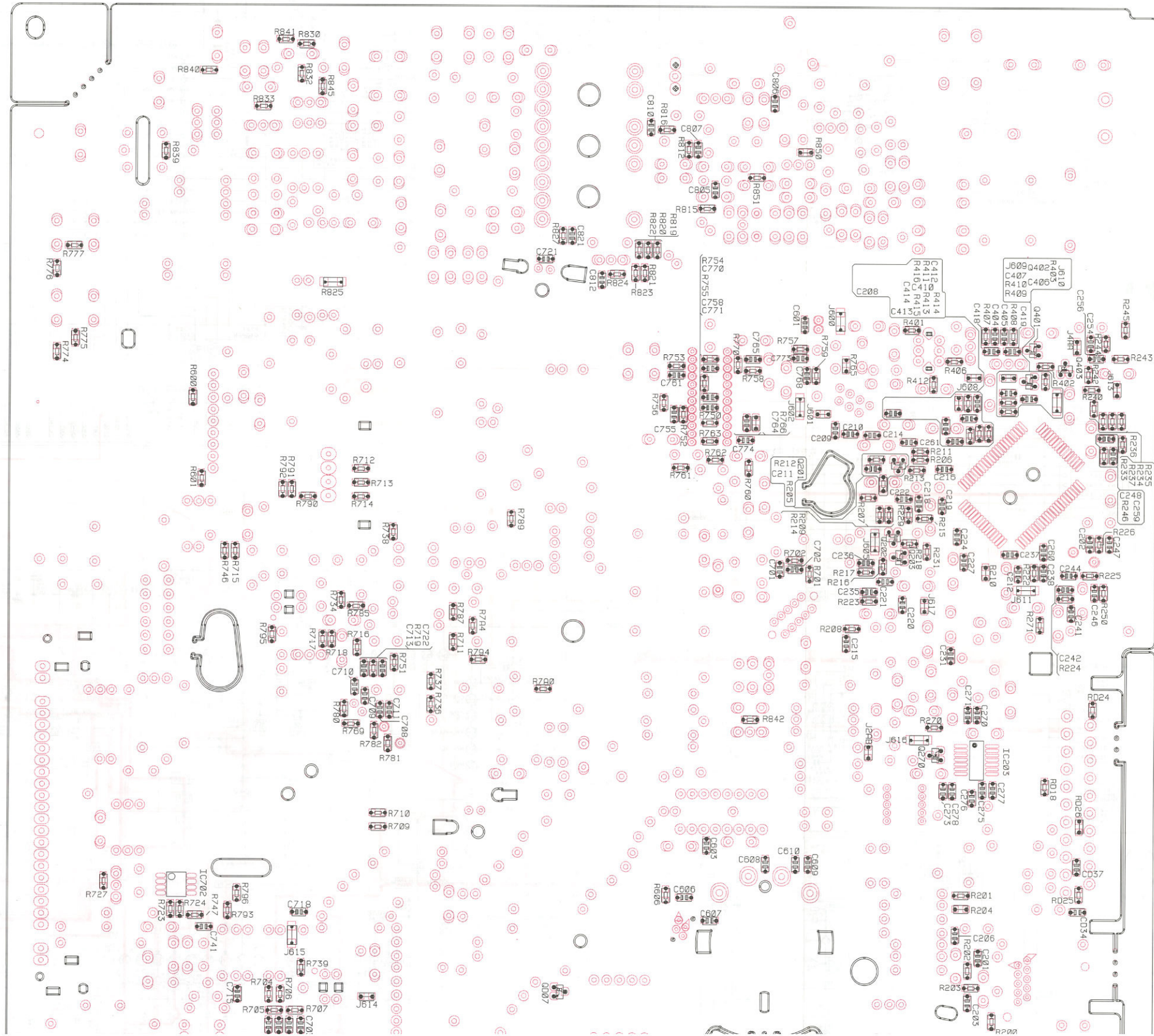
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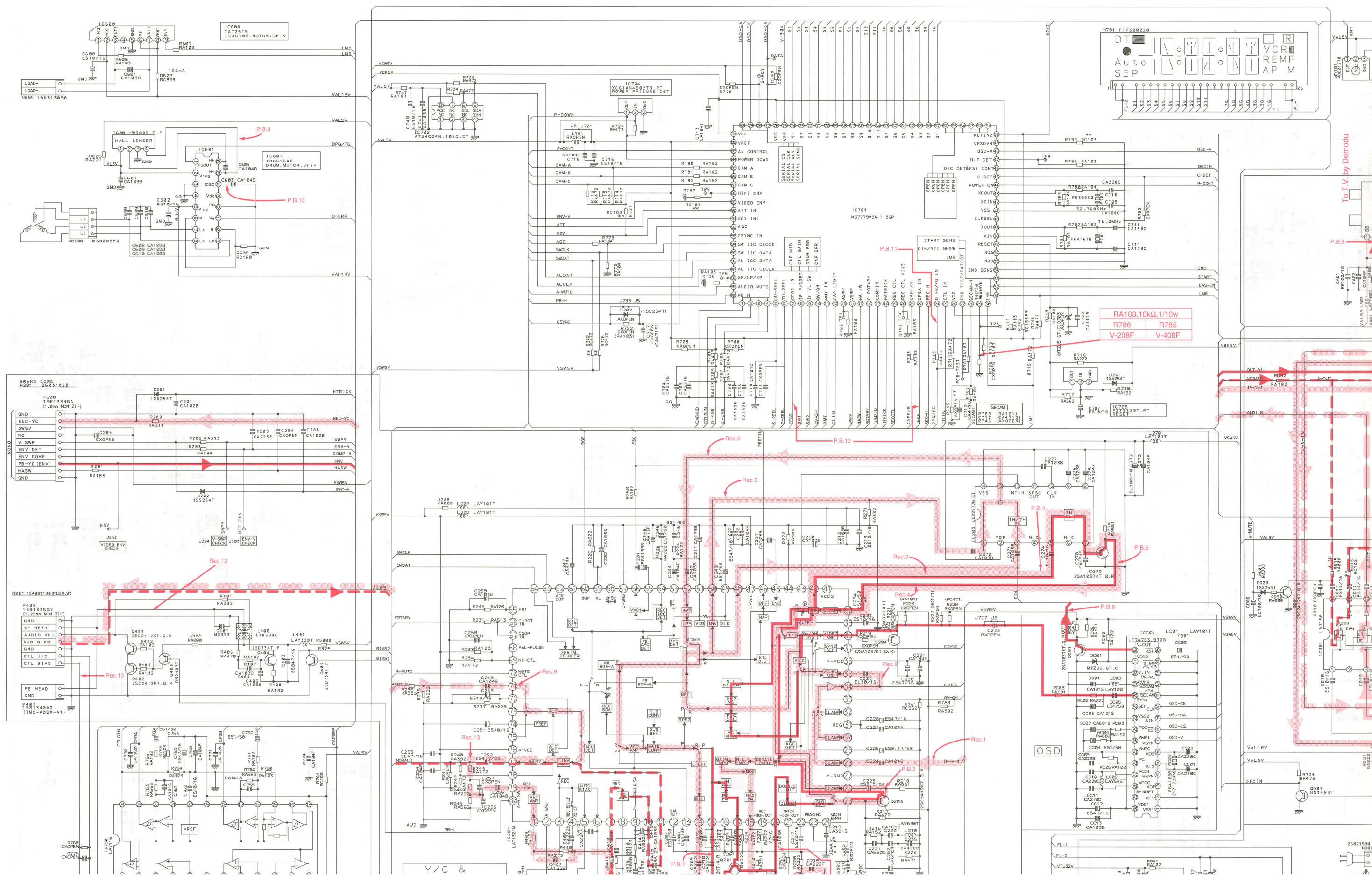
CIRCUIT DIAGRAM (V-208EG / V-408EG)

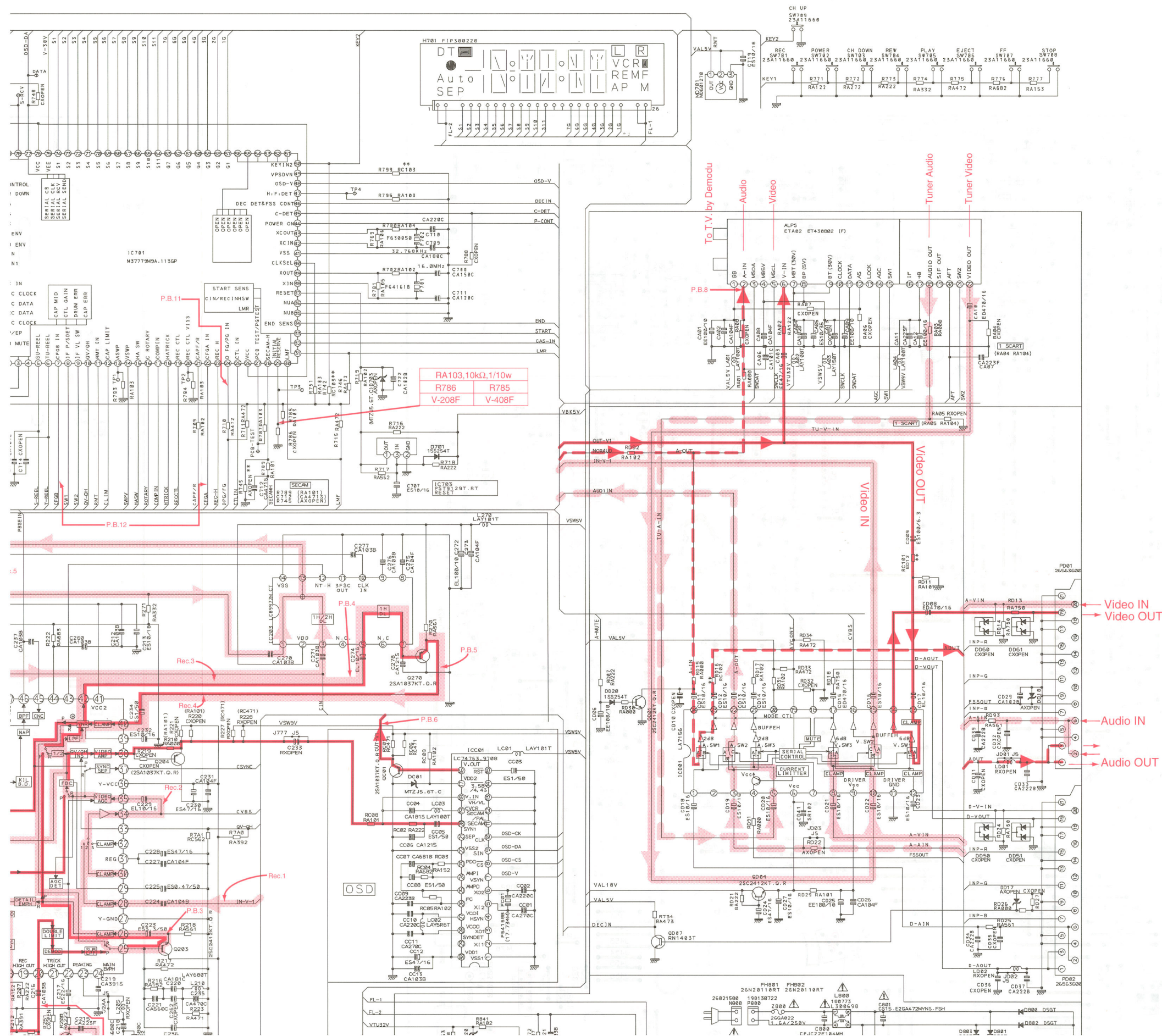
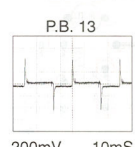
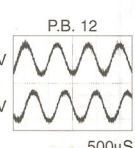
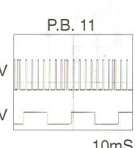
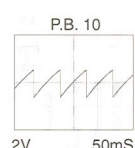
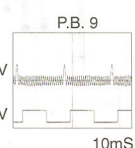
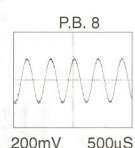
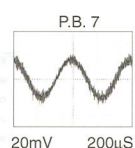
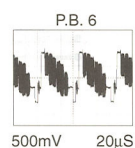
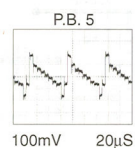
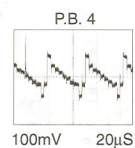
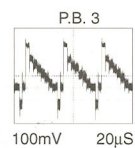
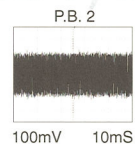
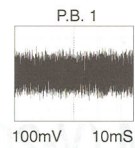
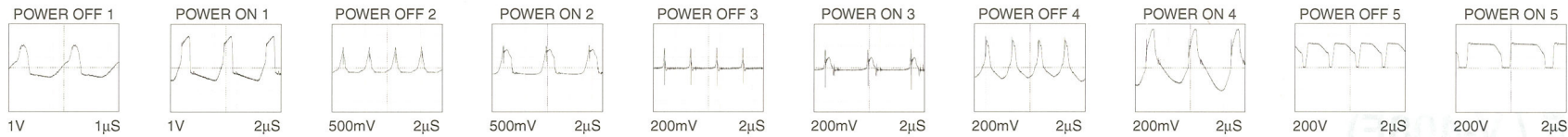


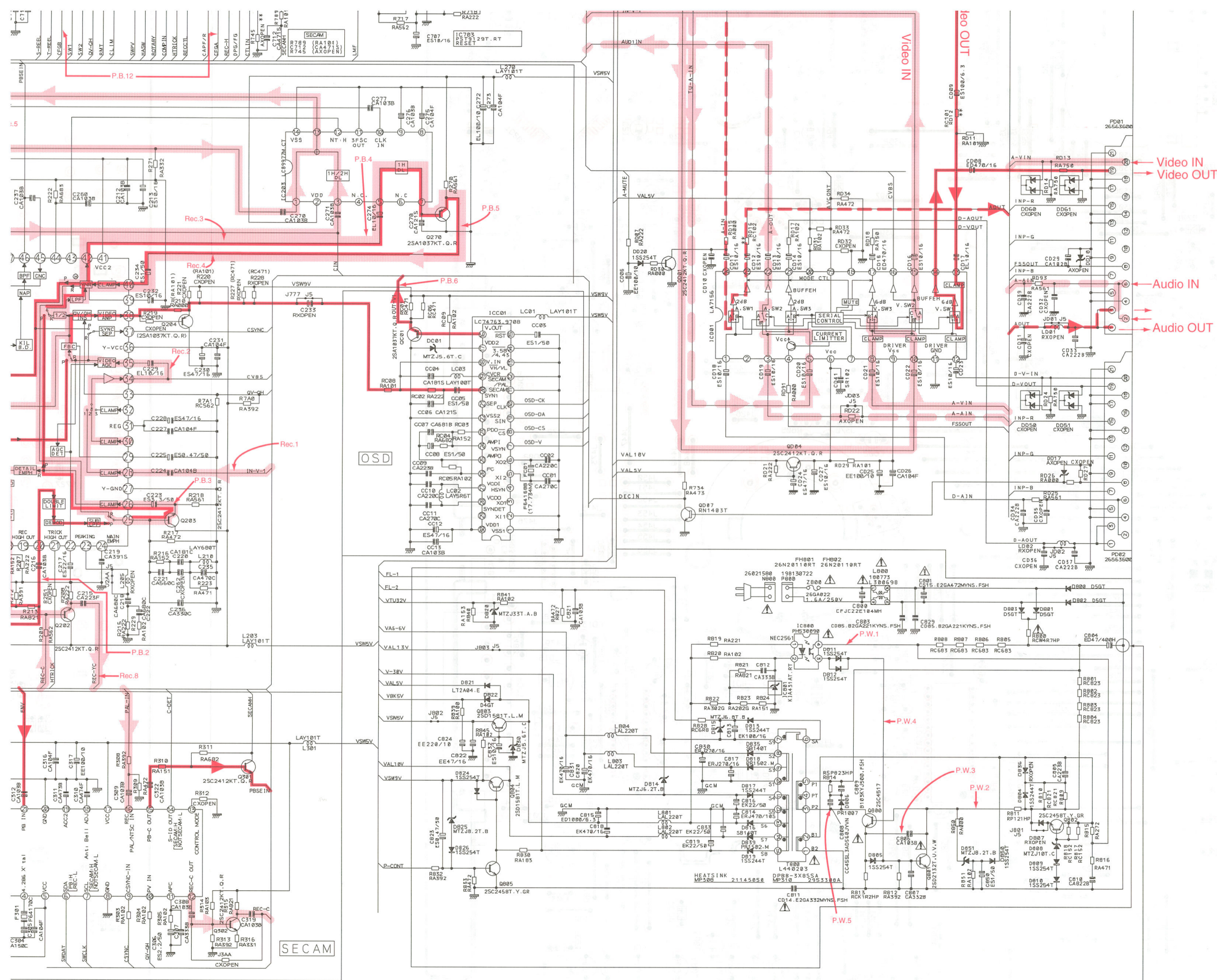






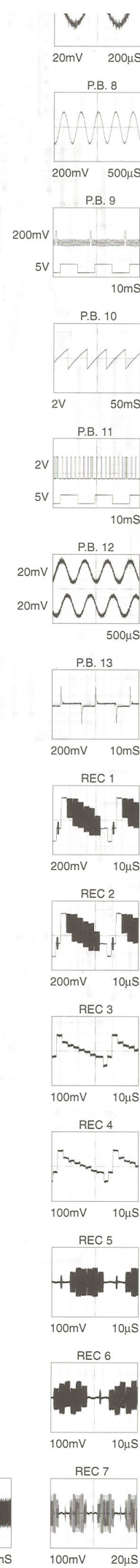






When measuring points PW1 to PW5 shown in the circuit diagram, connect the ground on the measurement device to the special insulated ground point on the primary side of the AC power supply, from the other ground. Be careful that these two kinds of insulated grounds are not shorted by way of the ground on the measurement device.

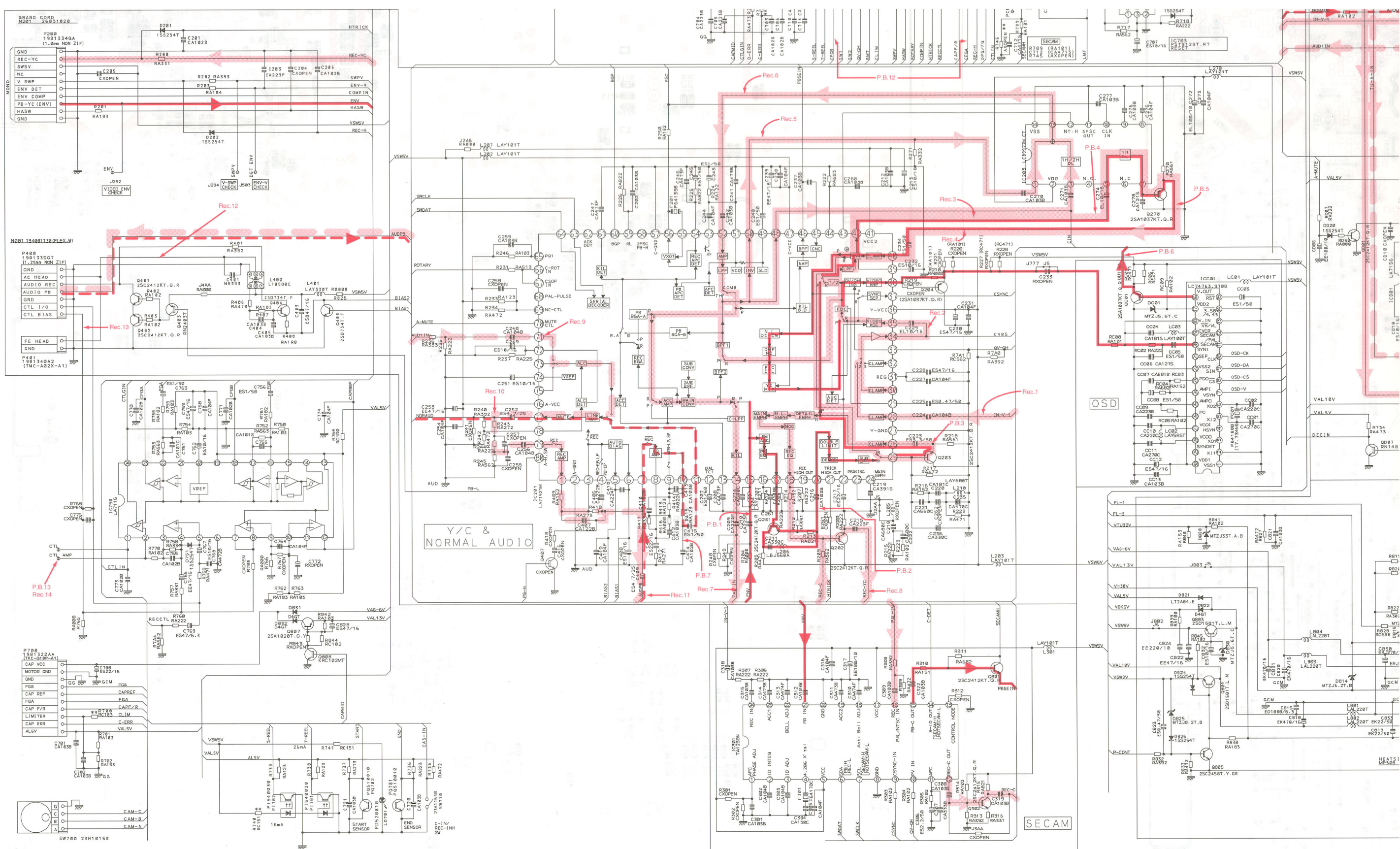
This mark (∇) indicates ground for all signals except the primary side of the AC power supply.



Service Manual

Video Cassette Recorder

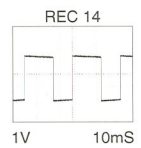
V-208F / V-408F



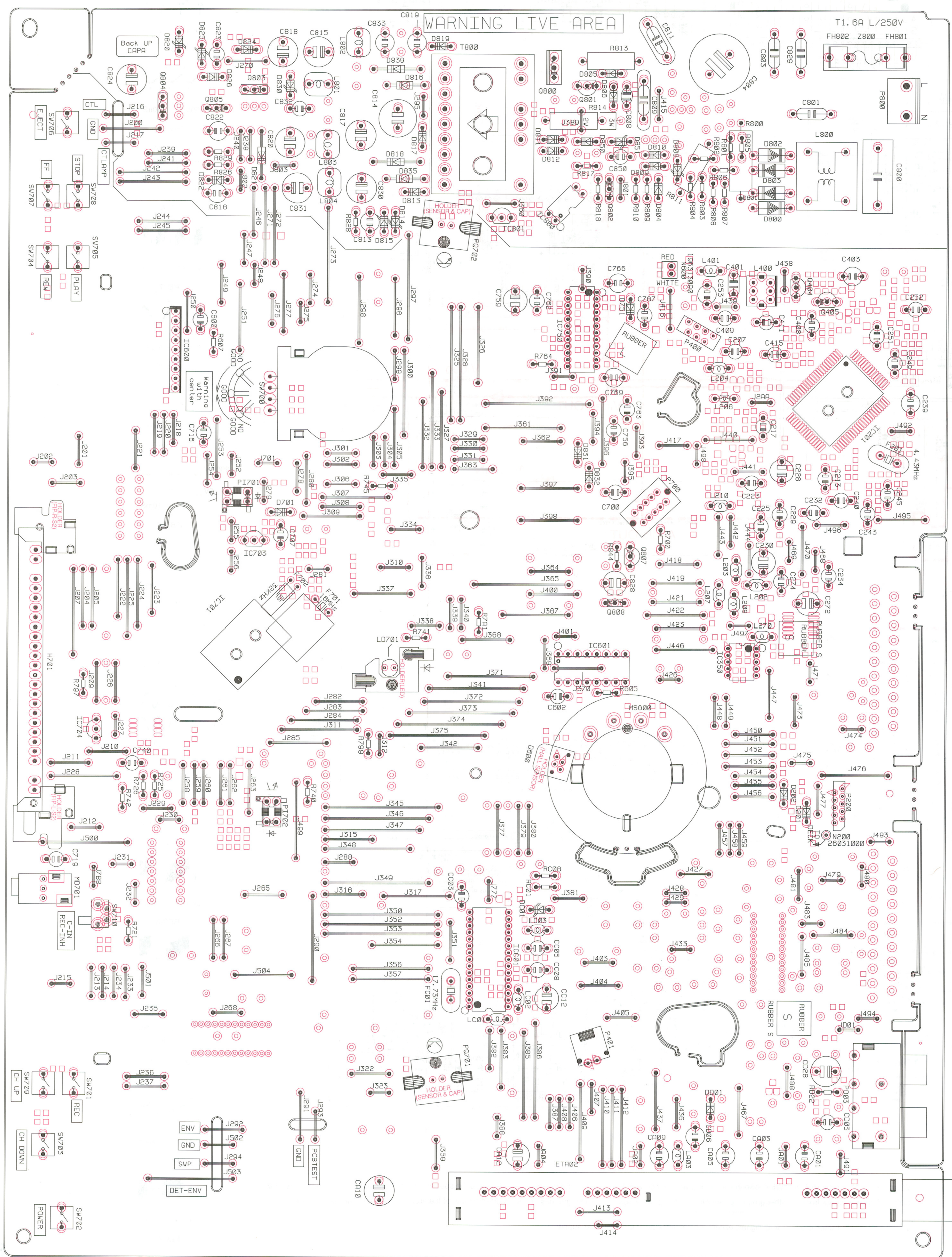
Parts Name	CAD-Code	Numerical Value
Chip Capacitor	CAR75C	R75=0.75pF
	CA3R0C	3R0=3.0pF
	CA100U	100=10 × 10 ⁻⁶ =10pF
	CA333B	333=33 × 10 ⁻⁹ =33000pF=0.033μF
	CA104F	104=10 × 10 ⁻⁹ =0.1 × 10 ⁻⁶ pF=0.1μF
Chip Tantalum	CAT0.1/35E	0.1/35=0.1μF / 35V
Electrolytic Capacitor	ES47/16	47/16=47μF / 16V
Chip Resistor	RBR68	R68=0.68 Ω
	RA1R0	1R0=1.0Ω
	RA180	180=18 × 10 ⁻² =18 Ω
	RA621	621=82 × 10 ⁻¹ =820 Ω
	RA102	102=10 × 10 ⁻³ =1000 Ω=1KΩ
Coil	LAUR22T	R22=0.22 μH
	LAY2R2T	2R2=2.2 μH
	LAY330T	330=33 × 10 ⁻⁶ =33 μH
	LAY151T	151=15 × 10 ⁻⁶ =150 μH

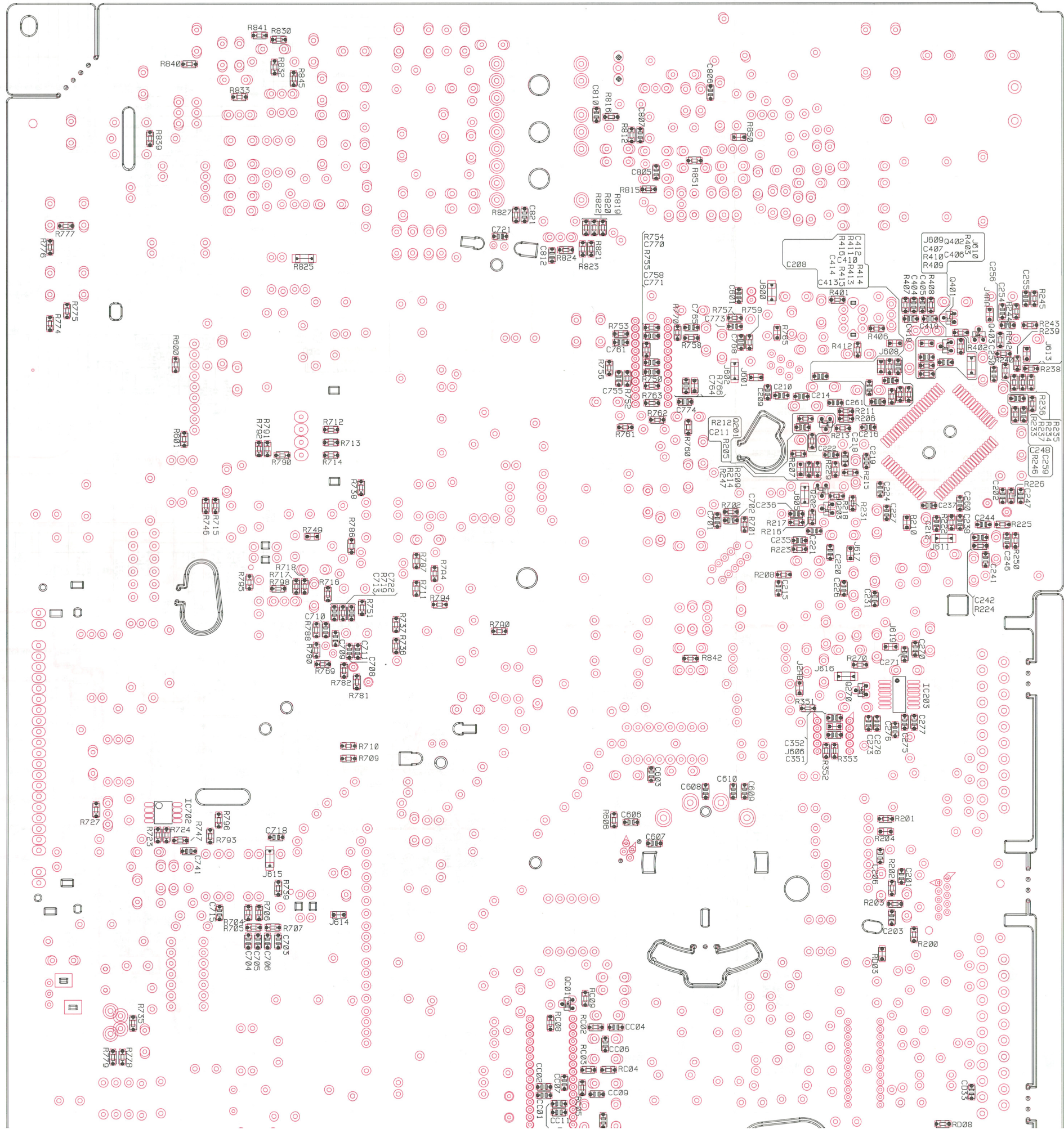
When measuring points PW1 to PW5 shown in the circuit of the AC power supply, from the other ground. Be careful.

This mark (⏏) indicates ground for all signals except the

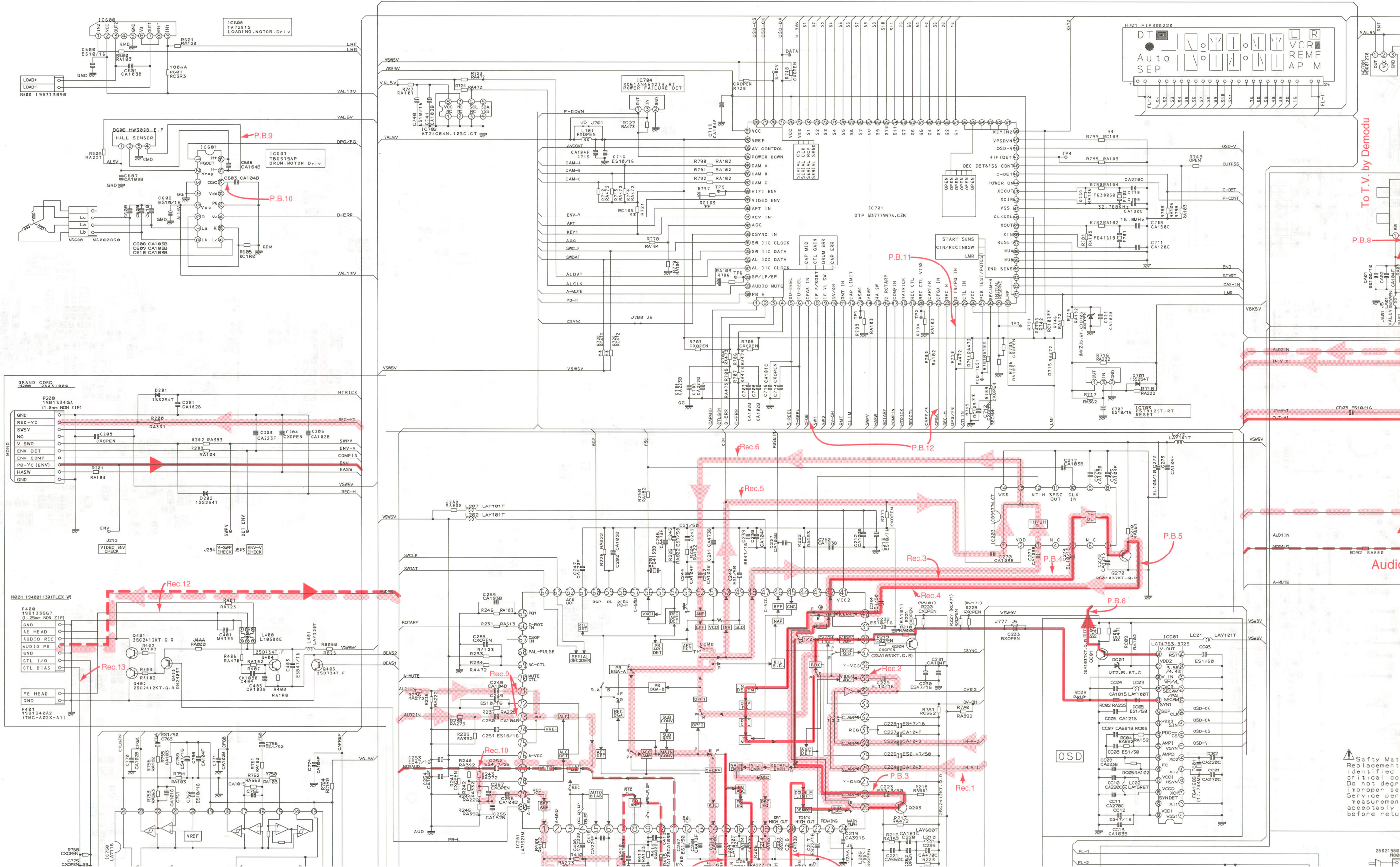


CIRCUIT DIAGRAM (V-208CZR)

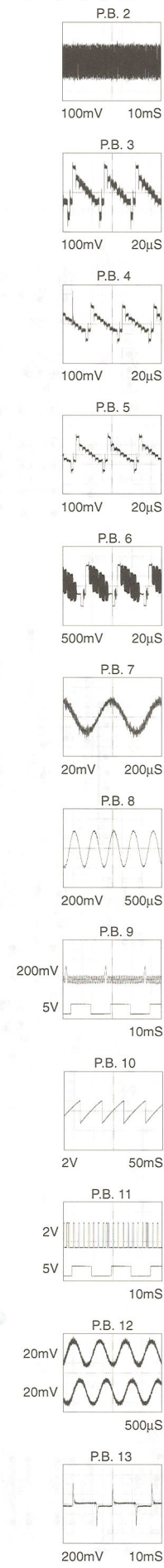
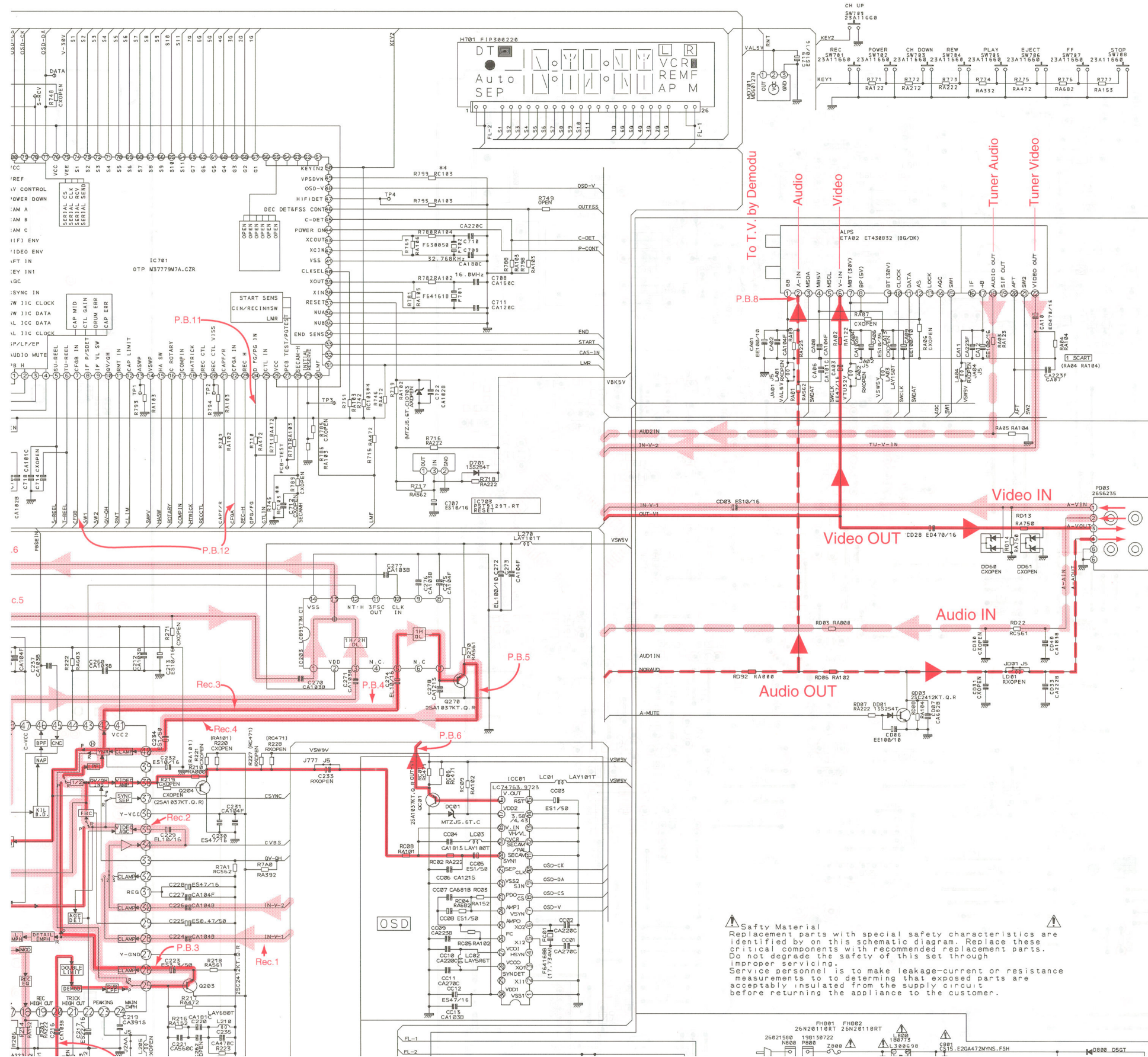


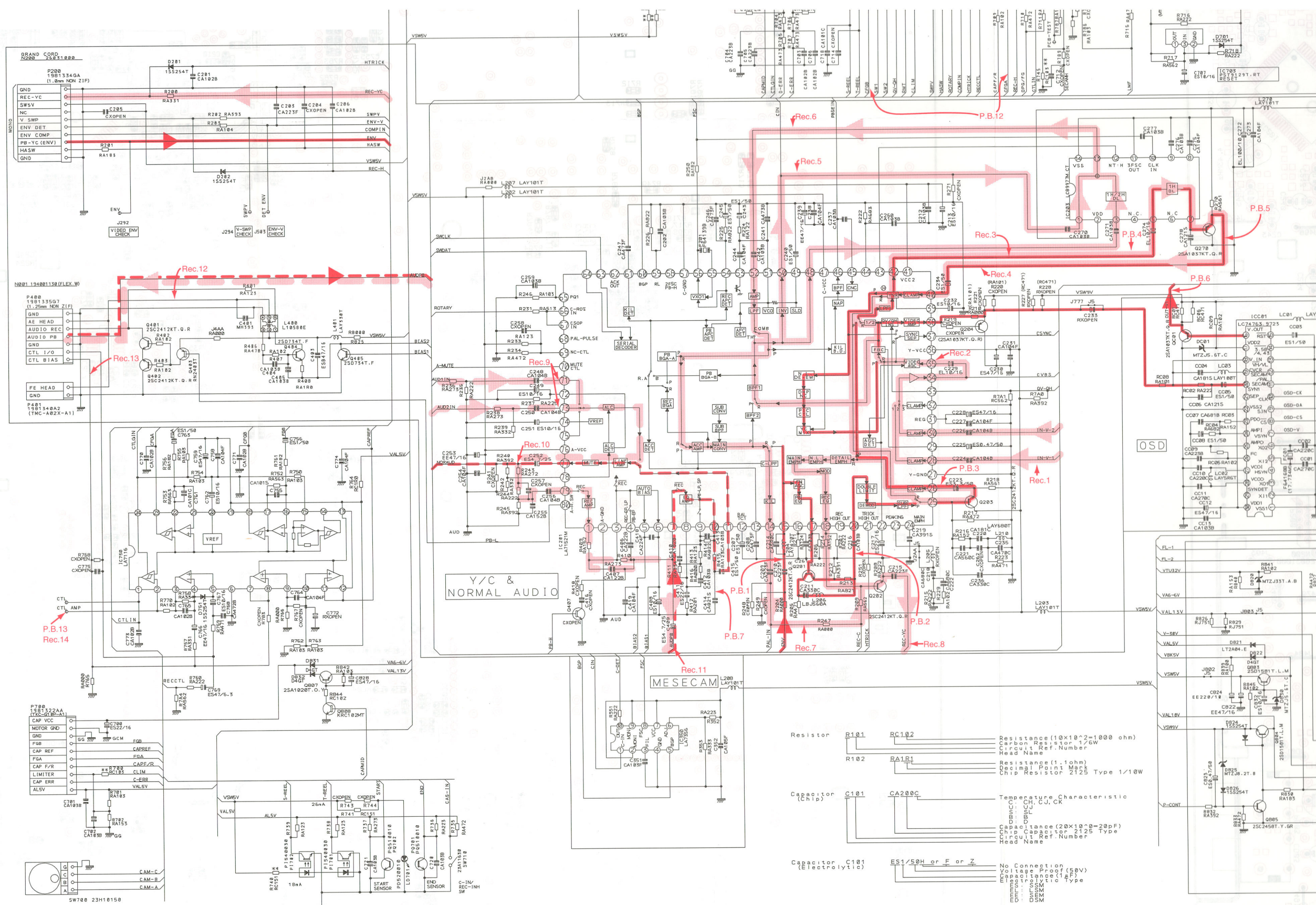


SCHEMATIC DIAGRAM (V-208CZR)



! Safety Mater
Replacement p
identified by
critical comp
Do not degrad
improper serv
Service perso
measurements
acceptably in
before return





Parts Name	CAD-Code	Numerical Value
Chip Capacitor	CAR75C CA3R0C CA100U CA333B CA104F	R75=0.75pF 3R0=3.0pF 100=10 × 10 ⁰ =10pF 333=33 × 10 ³ =33000pF=0.033μF 104=10 × 10 ⁴ =0.1 × 10 ⁶ pF=0.1μF
Chip Tantalum	CAT0.1/35E	0.1/35=0.1μF / 35V
Electrolytic Capacitor	ES47/16	47/16=47μF / 16V
Chip Resistor	RBR68 RA1R0 RA180 RA821 RA102	R68=0.68 Ω 1R0=1.0Ω 180=18 × 10 ⁰ =18 Ω 821=82 × 10 ¹ =820 Ω 102=10 × 10 ² =1000 Ω=1KΩ
Coil	LAUR22T LAY2R2T LAY330T LAY151T	R22=0.22 μH R2=2.2 μH 330=33 × 10 ⁰ =33 μH 151=15 × 10 ¹ =150 μH